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A Case Study of the Perceptions of Faculty, Administrators, and Staff Regarding the Development of a "Culture of Evidence" at Two Texas Community Colleges

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A Case Study of the Perceptions of Faculty, Administrators, and Staff Regarding the Development of a "Culture of Evidence" at Two Texas Community Colleges

by

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Dedication

To my family—

For those who, over many years,

Tenderly laid pebble after pebble

To form the path that would lead me here.

Acknowledgements

I give thanks to all those who
read, corrected, counseled, scheduled,
encouraged, supported, and believed.

Without you, this would not be.

A Case Study of the Perceptions of Faculty, Administrators, and Staff Regarding the Development of a "Culture of Evidence" at Two Texas Community Colleges

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In order to meet the educational and economic demands of the United States in the future, institutions of higher education must increase the number of students who persist to the completion of a certificate or degree program, especially low-income students and students of color (Carnivale and Desrochers, 2004). To increase the persistence and completion rates of these students at community colleges, national initiatives, such as the Achieving the Dream: Community Colleges Count initiative, have emphasized the importance of creating institutional environments in which planning and improvement efforts are data-driven (Achieving the Dream, 2005). This study explored the perceptions of faculty members, administrators, and staff directly involved in establishing this data-driven environment, also known as a "culture of evidence," and the extent to which those perceptions had disseminated through the larger college community. Through the use of a case study and focus groups using Interactive Qualitative Analysis (IQA) methods, the development of a "culture of evidence" at two Texas community colleges was examined as perceived by college constituents involved in its creation and by a group of college constituents indirectly influenced by their efforts.

The emerging themes are discussed in their relation to promoting and maintaining a data-driven culture in the future.

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INTRODUCTION

Economic Needs of the Nation

In a knowledge economy, education is critical in maintaining efficiency, productivity, and—most important—quality of life. As Carnevale and Desrochers (2004) note,

> The economic pressure for increasing access to education has been building over the past half century. The economic value of human capital has accelerated, and skill requirements on the job have increased markedly since the end of World War II, constantly upping the ante on education and training for good jobs (p. 39).

In order for the United States to maintain its position in the world economy as well as its high standard of living, the country needs an educated citizenry capable of complex critical thinking, of innovation, and of working in diverse settings and with diverse populations. As the demographics of the nation change, the country will be forced to rely increasingly on minority and low-income populations to meet the growing demand for "knowledge workers" (Murdock, 2006). This means more students of color and low-income students need to participate in higher education, persist in their studies, and complete certificates or degrees.

Community Colleges, Students of Color, and Low-Income Students

According to the U.S. Census Bureau, the number of students attending college has increased by 15% over the last ten years (Evelyn, 2005, p.A28). Gose (2005) reports this number is still growing—college enrollments in some states will continue to rise until 2020 (p. B10). Of this increase in students, the Census Bureau projects "a 77 percent increase for the Hispanic population, a 32 percent increase in the African American, a 69

percent increase in the Asian population and less than one percent increase in the white population" (Bailey, 2005).

This increase in students has and will continue to push community colleges into the spotlight as they remain one of the largest providers of undergraduate education in the nation, especially for students of color. In 2002, community colleges enrolled 42 percent of all undergraduates, including more than half of all Hispanic students and a disproportionate number of African American students (Bailey, Jenkins, and Leinbach, 2005d). Students of color reportedly comprise a third of the student population at community colleges, with "just over 26 percent of community college students either Black or Hispanic" (Wilson, 2004, p. 25). With their typically low tuition rates and workforce-linked programs, these institutions also attract more low-income students than other institutions of higher education (Purnell, Blank, Scrivener, and Seupersad, 2004). Thus, the community college has remained the main "point of access" to higher education for most students of color and low-income student populations, and as the number of college students of color burgeons in the future, it is unlikely that this pattern will change.

With such a disproportionately high amount students of color and low-income students enrolling at community colleges, these institutions play a critical role in helping these groups of students persist to degree and certificate completion. If these students succeed at the community college, they will have the knowledge and credentials they need to serve the nation's workforce or to progress to further education.

Low Completion Rates at Community Colleges

Findings on the success of students of color and low-income students at community colleges, however, show that these students persist to degree and certificate completion at unacceptably low rates. While almost 45% of all African American undergraduates attend community colleges, and the number continues to grow (Bailey, Jacobs, Jenkins, and Leinbach, 2003, p. 2), only 10.8% of African American students entering community colleges in 1995 completed a degree within five years (p. 4). Only

27% of these students received any type of award within six years, and those who did predominantly received certificates (Bailey et al., 2004, p. 3). Hispanic students at community colleges—56% of all Hispanic undergraduates—completed degrees over the same period at a higher rate (21.4%) but not as high as white (28.4%) or Asian (29.7%) students. Worse, degree completion rates for African American and Hispanic students are much lower at community colleges than at four-year institutions, where completion rates were 42.5% and 45.3% respectively (p.4). Degree completion rates for young first-time undergraduates in the lowest two SES quartiles—more than half of whom enroll in community colleges—were also disproportionately low compared to overall student completion rates (Bailey, Jenkins, and Leinbach, 2005c). Even overall student completion rates are abysmal: less than half "of those who initially enroll in a community college earn any degree or certificate within eight years of high school graduation" (Bailey, 2005). These statistics are consistent with the US Department of Education's findings that only about one in 10 students who begin in community colleges completes a bachelor's degree within five years, and that one is less likely to be a student of color (U.S. Department of Education, 2002).

STATEMENT OF THE PROBLEM

If students of color and low-income students at community colleges continue to persist at their current rates, the percentage of these students who are educationally prepared to enter the workforce and baccalaureate education will not be great enough to bolster the future economy, nor to ensure the quality of life for the individuals. Studies have shown that the success rates of students of color and low-income students are not the same at every institution, implying that, at least for these students, institutional characteristics influence student success (Bailey et. al., 2004; Bailey et. al., 2005; Scott, Bailey, and Kienzl, 2006). Thus, community colleges need to identify and adopt institutional characteristics that are supportive of student persistence and degree completion.

SPECIFIC PROBLEM AREA

Changing the characteristics of an institution is not an easy feat. A lengthy history of projects conducted with soft money, on the margins of institutions, has not adequately addressed this problem. These past efforts of community colleges to change the academic experience of students of color and low-income students have been limited in their impact in increasing the success of these students.

Effectiveness of past programs

For many years now, community colleges have tried to address the lower persistence and achievement rates of students of color and low-income students through the adoption of programs specifically targeting these populations. The TRIO programs are probably the most notable example of such efforts. In 1965, the US Congress "noted that financial aid alone would not ensure equal educational opportunity for disadvantaged students" (National Center for Education Statistics, 2004, p.1). In response, they created three initiatives—Upward Bound, Talent Search, and Student Support Services—that came to be known as the "TRIO programs" (Federal TRIO Office, 2004, p.6). The TRIO programs "are designed to identify promising students, prepare them to do college level work, provide information on academic and financial aid opportunities and provide tutoring and support to students once they reach campus…to ensure college retention and graduation" (Tyler Junior College, 2005). Over the last forty years, the TRIO programs have expanded to include eight initiatives and the serve more than 1,200 colleges and universities across the nation, making it one of the oldest and largest federally supported educational initiatives.

While the TRIO programs have had significant impact on the lives of individual students, the program's effect on the environment of higher education has been limited.

The presence of these programs on a college campus does not ensure that all eligible students at the institution are served; in fact, of the 11 million Americans eligible for TRIO programs, only 7% are served annually (Council for Opportunity in Education, 2005, p.2). In addition, the efforts of the TRIO programs are typically not supported by other areas of the institution: when funding for these programs disappears, the support services disappear also. For example, in 2004, federal budget cuts closed 1,403 programs serving 451,819 students; the institutions losing these programs lacked the resources to alternatively provide services to the TRIO student population (Council for Opportunity in Education, 2005). With limited integration into the core structure of institutions, the TRIO programs remain islands of student success sustained only through additional federal dollars.

Efforts Aimed at Changing an Institution's Core

Advocates for the success of low-income students and students of color promote efforts aimed at transformational change at the heart of community colleges, not boutique programs at the margins of the institution's work (McClenney, 2004). These proponents argue that community colleges need to change how they do business in order to create environments and systems in which all students succeed. Some national initiatives have begun to look for ways to promote this idea of institutional transformational change at the community college level.

Promoting a "Culture of Evidence"

One of these initiatives, Achieving the Dream: Community Colleges Count, has approached transformational change in community colleges by advocating the development of a "culture of evidence," or a culture in which institutional planning and decision-making processes are data driven. As Kuh et. al (2005) note, the use of data to inform decisions made at institutions of higher education has rarely been directly studied

but has been asserted in the literature for many years (p. 278). McClenney and McClenney (2003) use the term "culture of evidence" to describe the environment of an institution in which "institutional and individual reflection and action are typically prompted and supported by data about student learning and institutional performance" (p. 3). The Achieving the Dream initiative posits that when community colleges know and use data on the experiences of the students at their institutions when making decisions about how to serve those students, they will be more capable of removing barriers to student success and building programs and services that help students succeed. As there are fewer barriers for students and more programs that have been shown to increase student success at the colleges, more low-income students and students of color will persist and complete certificates and degrees (MDC, 2005).

The use of data in institutional planning and decision-making processes to promote equity in student performance and success is substantiated in the work of Bensimon (2004). Through the Center for Urban Education in the Rossier School of Education at the University of Southern California (USC), Bensimon worked with 14 colleges and universities in California to create the "Diversity Scorecard," a measurement tool used to assess the success of students of color at an institution of higher education. The Diversity Scorecard's core premise is that

> Evidence about the state of equity in educational outcomes for underrepresented students presented in the form of graphically displayed quantitative data can have a powerful effect in mobilizing institutional attention and action (Bensimon, 2004, p. 45).

When individuals within an institution see, through the use of data, the magnitude of inequities that exist among students, and then "analyze and integrate the meaning of these inequities," they are more likely to act upon the performance gaps so that all students are able to succeed (p. 46). Through the use of the Diversity Scorecard, the 14 participating

colleges were able to create a broad awareness of inequities in the performance of their students, and 11 of the colleges have committed themselves to substantial change initiatives in order to act upon the data that emerged.

The development of a "culture of evidence," like any other effort of transformational change, occurs when fundamental changes are made to an institution's culture, or the way constituents of the college perceive what they do, and how and why they do it. A "culture of evidence" will exist at an institution when its constituents perceive that data-driven planning and decision-making are central components of their daily work. Thus, in order to understand how a culture of evidence develops, or to what extent it has developed at an institution, one must study the perceptions of the constituents of the college. When these perceptions are understood, obstacles hindering the use of data in existing organizational cultures can be addressed, and colleges can change existing cultural norms that "exert a decisive influence on the overall ability of the organization to deal with the challenges that it faces" (Morgan, 1998, p. 122). However, since the principle traits of organizational culture are "stability and consistency," this restructuring the cultural environment of an institution can be very difficult to do (Hansen, 2003, p. 63).

This concept of a "culture of evidence" is new to the community college world and its presence is likely limited to very few colleges. The better community college leaders understand what contributes to and/or hinders the development of a "culture of evidence," the more likely they will be able to create such a culture at their institutions.

The literature suggests that there are four important components needed to develop data-driven environments. First, key leaders at the community college must be dedicated to the use of data in institutional planning and decision-making. If data aren't a

priority to the college's top administrators, data-driven decision-making is less likely to be a priority of their subordinates and the rest of the campus community (Graves, 2005; McClenney, 2005; Roueche, Ely, and Roueche, 2001). Second, community colleges need data system capacities able to collect and analyze data at the institutional and classroom level on a continuous basis. A lack of data system capacity often exists at community colleges because the use of data for purposes other than routine compliance reporting hasn't been made a priority at the institution (Green, Smallen, Leach, and Hawkins, 2005; Graves, 2005; and Hawkins, 2006). Third, there needs to be a broad level of participation by college constituents in the college's institutional improvement efforts. Often, few members of the campus community are involved in the analysis and use of student learning data because of the lack of adequate data systems, because data are not presented in a user-friendly and timely way, because data are not perceived as credible, because leaders are unwelcoming of "bad news" about college performance, or because data and information are tightly held. But without broad participation across the college, the use of data isn't integrated into the cultural norms of the college's constituents (Birnbaum, 2000; Ewell, 1989; Paloma and Banta, 1999; Nichols, 1995). Fourth, the skills of college constituents in understanding and using data need to be developed. Many members of the campus community typically either lack a fundamental understanding of how to interpret and use data in their daily activities or are presented with data displayed in ways "that don't make sense to most reasonable alert adults" (McClenney, 2004, p. 14; Morest, 2005).

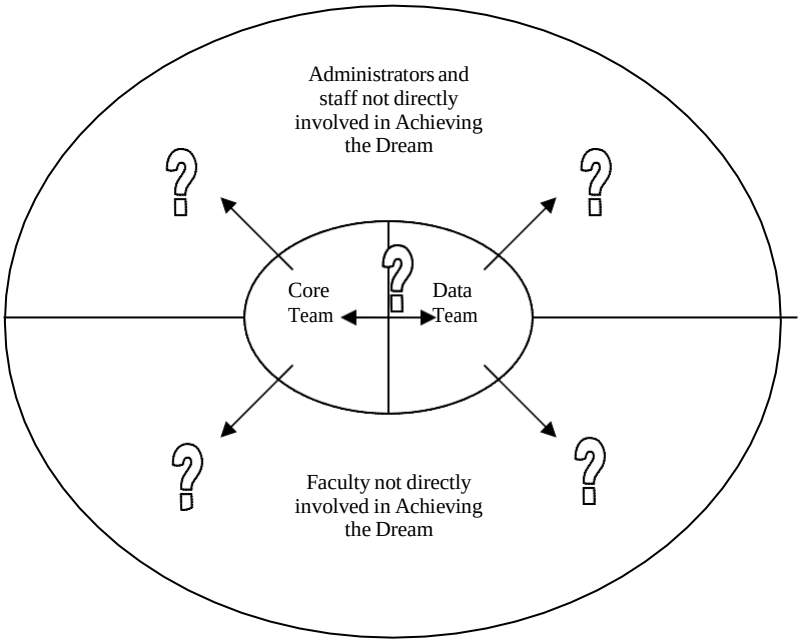
PURPOSE OF THE STUDY

When a college leadership team understands how components of a "culture of evidence" are perceived by constituent groups, it is able to adjust how those components

are presented in order to eliminate inhibiting factors and build upon factors contributing to a data-driven culture. The purpose of this study is two-fold. First, the study will examine the extent to which the perceptions of a "culture of evidence" held by a group of college constituents responsible for its development at the institution have disseminated across the greater college community. This will be accomplished through an intense examination of two community colleges committed to creating such a culture. Through the use of a case study approach, administrators, faculty and staff at two colleges with very different institutional cultures—College Two and College One, both from the Studied Community College District in San Antonio, Texas—will be given a framing definition of a "culture of evidence" and then asked to articulate the salient themes in the development of such a culture at their institutions. The first stage of this process will include members of the colleges' Achieving the Dream Core and Data teams, and their perceptions will be compared to the perceptions of other administrators, faculty, and staff at the colleges not directly involved in the Achieving the Dream initiative.

Second, this study will explore the extent to which the four components underlying the development of a "culture of evidence" (key leadership support, data system capacity, broad participation, and an understanding of data usage) emerge in the perceptions of community college administrators, faculty, and staff with the explicit goal to develop a data-driven culture. To this end, the study will focus on exploring (1) perceptions of the participants regarding the extent to which they perceive that a culture of evidence exists at their colleges; and (2) factors identified as either a) inhibiting or b) contributing to the development of a culture of evidence.

Figure 1.01: Study Design in Exploring Perceptions of College Constituents Directly and Indirectly Involved in the Development of a "Culture of Evidence"



SIGNIFICANCE OF THE STUDY

Results of this study can inform the practice of other colleges by, first, providing a process through which similar perceptions at other institutions can be collected, and second, by presenting similar perceptions that arise at two very different colleges that might also be shared by a greater number of community college constituents across the country. At the very least, the findings from this study will provide a starting point for discussion at community colleges in what promotes and discourages a college's development of a data-driven culture.

DEFINITION OF TERMS

In creating an underlying framework for any form of research study, it is important to clarify key terms upon which the study is based. To this end, the following terms are presented as defined by the researcher:

- *Achieving the Dream:* "a multiyear national initiative to help more community college students succeed. This initiative is particularly concerned about student

groups that traditionally have faced the most significant barriers to success, including low-income students and students of color. Achieving the Dream emphasizes the use of data to drive change and focuses on measurable outcomes, especially closing achievement gaps" (Achieving the Dream, 2005b).

- *Culture of evidence:* the environment of an institution in which "institutional and individual reflection and action are typically prompted and supported by data about student learning and institutional performance" (McClenney and McClenney, 2003, *Part II: The Culture of Evidence*, p. 3)
- *Developmental or remedial education:* "Program, course, or activity (in areas of reading, writing, or math) for students lacking those skills necessary to perform college level work at the level required by your institution" (National Center for Education Statistics, 1991, p. 46)
- *Evidence:* measurable and well-defined outcomes used by an institution to understand a phenomena
- *Institutional culture:* "the deeply embedded patterns of organizational behavior and the shared values, assumptions, beliefs, or ideologies that members have about their organization or its work" (Kezar and Eckel, 2002, p. 438)
- *Low-income students:* undergraduate students "with a family income below 125 percent of the federally established poverty threshold for their family size" (Choy, 2000).
- *Students of color:* students who don't identify themselves as being white or Caucasian; in the Achieving the Dream initiative, "students of color students" most specifically refers to African American and Hispanic students.

- *Student success:* individual student completion of courses taken (with a grade of "C" or better), the completion of developmental coursework and the subsequent enrollment into credit-bearing courses, successful completion of gatekeeper courses (with a grade of "C" or better), persistence from one semester to the next, and the completion of associate degrees and certificates (Achieving the Dream Website, 2006)

RESEARCH QUESTIONS

This study will take an inductive approach, looking for themes that arise in the collection of data. To that end, the following questions will be addressed:

- How do faculty, student service professionals, and administrators on the college's Achieving the Dream Core and Data teams perceive the presence of a "culture of evidence" at their institution, as defined by the *Community College Inventory*?
- What is the understanding of the faculty, student services, and administrator team members of a culture of evidence? What do they perceive are the characteristics at the institution that their either contribute to or inhibit the development of a data-driven culture? How do they perceive the system of relationships these characteristics construct?
- How do faculty, staff and administrators not directly participating in the college's Achieving the Dream efforts perceive the presence of a "culture of evidence" at their institution, as defined by the *Community College Inventory?*
- To what extent has the system underlying a "culture of evidence" at the institution, as perceived by the Core and Data team members, permeated the perceptions of

faculty and administrators at the college not directly participating in the Achieving the Dream process?

UNDERLYING ASSUMPTIONS

In preparing a research study, it is important to disclose assumptions held by the researcher that underlie the structure of the study itself. There are two main assumptions forming the basis of the research study. First, it is assumed that *colleges who officially commit to creating a culture of evidence have a higher probability of achieving this goal*. Each of the thirty-five colleges in the Achieving the Dream initiative were required to commit to and show evidence of a use of "data to drive strategies, monitor progress and evaluate outcomes," as well as "report data and outcomes broadly, both on and off campus" (Achieving the Dream Website, 2006). These colleges also agreed to measure student completion of developmental coursework and progression into credit-bearing courses; enrollment in and successful completion (a grade of "C" or better) of gatekeeper courses, such as beginning-level English and math courses; successful completion of all coursework; persistence from one semester to the next, and the number of certificates and degrees earned. It is assumed an institution with this emphasis on the use of data at the institutional level is more likely to foster data-driven decision making processes than comparable institutions without these espoused values. Thus, colleges participating in Achieving the Dream were chosen in this study instead of other non-Achieving the Dream institutions.

Second, this research study assumes that an *institution's culture can be understood to a great extent by listening to the views of its constituents*. Barkdoll (1998) defines culture as "the way we do things around here" (p. 1), and Flannigan (2005) expands this definition to "a social construct defining who we are manifested by what we

do" (p. 7). The ideas of "who we are" and "what we do" are seen as measurable through the articulated perceptions of the constituents of a culture.

CONCLUSION

In order to meet the educational and economic demands of the United States in the future, community colleges must increase the number of students who persist to the completion of a certificate or degree program (Carnivale and Desrochers, 2004). National initiatives, such as the Achieving the Dream initiative, have emphasized the importance of creating institutional environments in which planning and improvement efforts are data-driven (Achieving the Dream, 2005a). This study will explore the perceptions of faculty, administrators, and staff at two colleges in the process of developing a "culture of evidence". Through the use of a case study, the development of a "culture of evidence" at two Texas community colleges will be examined, and the emerging themes unique to these institutions, as well as common to community colleges in general, will be discussed in their relation to promoting student success.

Chapter 2: Literature Review

INTRODUCTION TO THE LITERATURE

A key component of the Achieving the Dream: Community Colleges Count (ATD) initiative is the development of a "culture of evidence" on the campuses of the 35 participating colleges. This chapter will briefly review the Achieving the Dream initiative, develop a clearer understanding of a "culture of evidence," and then present a model of the four components integral to the creation of a data-driven culture.

Community colleges, situated within the larger, highly anecdotal culture of American higher education, have historically placed little emphasis on data in their planning and improvement efforts (Cohen and Brawer, 2003; Johnston and Kristovich, 2000). In fact, the term "culture of evidence," was coined fairly recently (McClenney and McClenney, 2003). In building a common understanding of this term and its significance in supporting student success, the following chapter provides an overview of the reviews the literature on culture and the use of evidence in education; provides background information on the Achieving the Dream initiative; and then develops a clear, working definition of "culture of evidence" and links the development of this definition to a theoretical model based on leadership, participation, and the definition of "evidence" and institutional capacity to use it.

AN INITIATIVE FOR CHANGE: ACHIEVING THE DREAM

As community colleges move into the twenty-first century, many have begun to address the widening gap that exists in student performance between different student populations. A few foundations have dedicated funds in support of initiatives that focus on closing this gap. One of these initiatives, Achieving the Dream: Community Colleges

Count—funded by the Lumina Foundation for Education, KnowledgeWorks Foundation, and Nellie Mae Education Foundation—has become the focal point of discussion at community colleges across the nation. A better understanding of this initiative could bring far-reaching change to community colleges across the nation and greater success to their students, especially through the use of data-driven processes.

Achieving the Dream: Community Colleges Count

Achieving the Dream (ATD) encompasses a "national effort to increase the success of community college students, particularly those groups that have been underserved in higher education" (Lumina Foundation for Education, 2005, p. 1). The project includes seven partner organizations: the American Association of Community College; the Community College Leadership Program, University of Texas at Austin; the Community College Research Center, Teachers College, Columbia University; Jobs for the Future; MDC; MDRC; and Public Agenda. Currently, 35 colleges from seven different states are participating in the project. These colleges were selected due to the large proportions of students of color and low-income students they serve; the number of such institutions found within each state was also considered. The goal of the project is to include 50 – 75 community colleges in seven to ten states over the next few years. Achieving the Dream is looking for funds from additional partners to further extend the program into additional states in the future.

The Achieving the Dream initiative "seeks to create mechanisms to sustain…five strands of work": Institutional change, policy, public engagement, new knowledge, and partners' capacity (Achieving the Dream, 2004, p. 13). These five strands interweave the efforts of institutions and the external resources and strengths available in the community. As institutions change to improve student outcomes, external efforts are

simultaneously undertaken to align state policies with the effective changes, engage the public and partners in the initiatives leading to success, and build a common base of knowledge that can be tapped by community colleges across the entire nation. Key to these changes is a focus on the creation of a "culture of evidence" (Achieving the Dream Website, 2006).

The first characteristic sought by Achieving the Dream colleges is "college leadership that strategically focuses on the success of all students," knowing which students succeed and which do not (Achieving the Dream, 2004, p. 2). This means that student outcomes are disaggregated by race, ethnicity, and socioeconomic status, in order to gauge where the critical issues for each subgroup lie, and then efforts are taken to address those issues. The second characteristic is "a practice of using data continuously to assess institutional performance and identify areas for improvement" (p. 2). To meet the needs of these students, Achieving the Dream colleges focus on five key goals: to get students to 1.) complete remedial courses and move on to credit-bearing courses; 2.) enroll in and complete "gatekeeper" courses such as introductory math and English; 3.) complete the courses they take, earning a grade of C or higher; 4.) re-enroll from one semester to the next; and 5.) earn certificates or degrees (Lumina Foundation for Education, 2005, p.2). The goal is that, by collecting these data, Achieving the Dream colleges will be able to pinpoint the strengths and weaknesses of the institution and draw from these findings in creating effective interventions. The key to achieving this goal, however, lies in each institution's ability to create a culture supportive of data-driven decision-making.

The Achieving the Dream project implements a model for institutional research based upon broad-based participation. Achieving the Dream colleges are required to

form two teams "to lead the process of analyzing data and guiding institutional change": a Core team, and a Data team (MDC, 2004, p. 11). The Core team includes the president's administrative team, faculty leaders, and the institutional research director. The Core team is responsible for "lead[ing] a process for setting institutional priorities, goals and strategies" and involving students, faculty, and the community in the process (p. 11). The Data team, composed of the IR director, faculty, and staff, develops a "candid analysis of the college's performance with respect to student outcomes, with a special focus on low-income students, students of color and others who face barriers to success." The team approach aims to engage a broad range of faculty and staff in examining the data and identifying areas where strategic improvements could significantly boost student success rates. In order to facilitate this change in approach to institutional research, Achieving the Dream provides each college with an external coach and data facilitator. These additional personnel act as resources in developing trust and implementing effective tracking and analysis processes. Who participates in this team approach and how that participation is structured, however, varies among Achieving the Dream colleges.

Although each participating college shares the same goal of creating a culture of evidence, their diverse implementation strategies will inevitably differ in effectiveness. In fact, a few colleges have made significant initial progress in linking their institutional effectiveness efforts to institutional culture. Examining one of these colleges could provide insight to other colleges into how such a culture might be developed and fostered.

DEFINING A "CULTURE OF EVIDENCE"

Achieving the Dream intends to support participating colleges in moving toward a "culture of evidence" (McClenney, 2005) and away from what Bailey and Alfonso (2005) call a "culture of anecdote," in which "community colleges justify themselves simply by telling encouraging stories about individuals who overcome daunting barriers to succeed" (p. 6). As they explain,

> Developing a "culture of evidence" in community colleges involves a commitment to carry out thoughtful research—which often must be complex—and an ability to engage faculty, administrators and even students in meaningful discussions about the implications of that research (p. 27).

The national initiative uses McClenney and McClenney's (2003) *Community College Inventory: Focus on Student Persistence, Learning, and Attainment* to clearly define the components of a "culture of evidence." This college characteristic is presented as "Institutional reflection and action typically prompted and supported by data about student persistence, student learning and institutional performance" (p. 3). Indicators of a "culture of evidence" are described at follows:

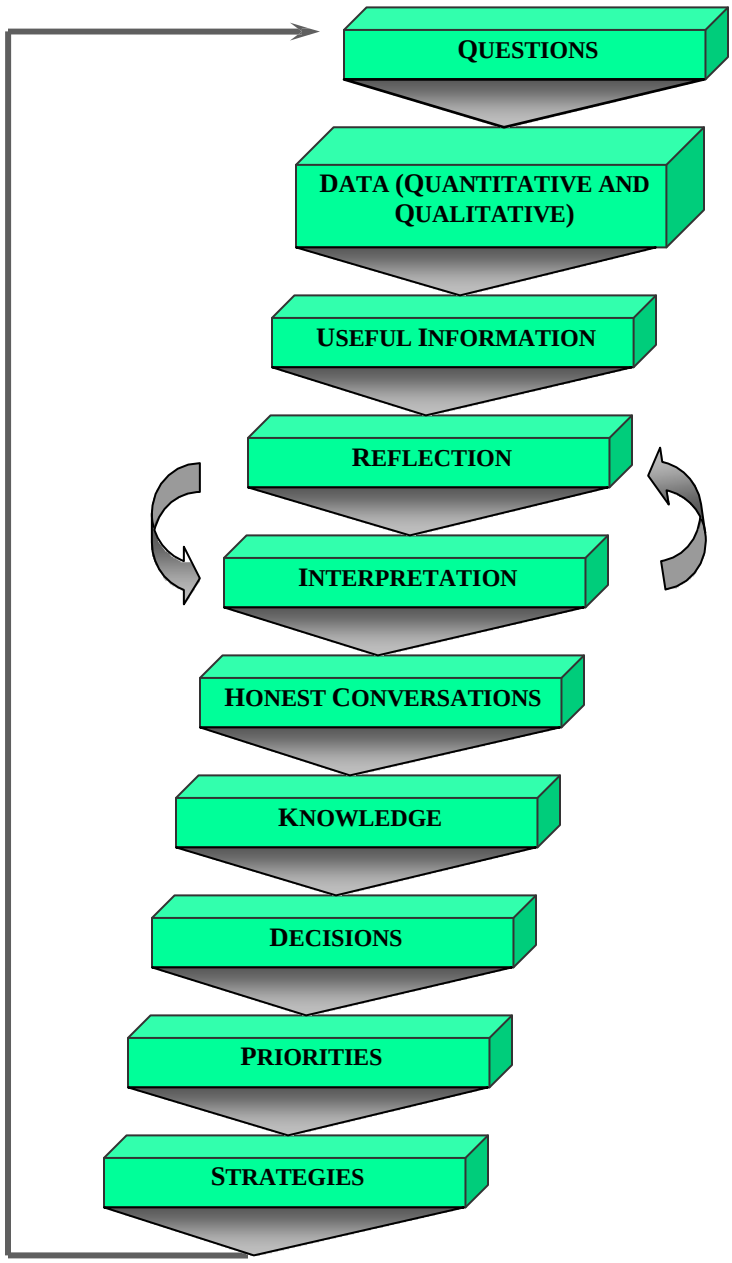
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:
    - Student persistence
    - Student learning
    - Student attainment (certificates, degrees, transfer)
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.

4. The institution regularly collects, analyzes, and reports data pertaining to the following:
    - Successful completion of remedial/developmental courses
    - Developmental students' success in entry-level college courses
    - Successful completion of selected gatekeeper courses (e.g. high-enrollment/high failure-rate courses such as college algebra, freshman composition, anatomy and physiology, etc.)
    - Rate of successful course completion for all courses (C or better)
    - Student persistence—re-enrollment from one term to the next
    - Completion of certificates and associate degrees
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including
    - gender
    - race/ethnicity
    - income level
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.
7. The results of student and institutional assessments are used routinely to inform institutional decisions regarding:
    - strategic priorities
    - resource allocation
    - faculty and staff development
    - improvements in programs and services for learners

8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based (McClenney & McClenney, 2003, p. 3)

The underlying components of a "culture of evidence" in the *Community College Inventory* are a commitment to gathering, reviewing, and discussing data on student and institutional success across the institution; a habit of breaking down data by class and student characteristics to better understand the barriers existing in the diverse experiences of students; and a willingness to base institutional decisions and plans on the knowledge gained from the available data. College administrators and faculty can use the *Community College Inventory* as a tool to measure (on a five-point scale) the extent to which their institution has implemented the characteristics leading to a data-driven culture. McClenney (2005) also presents a model, *Data-Driven Process for Achieving the Dream: Ten Steps,* to depict the steps required to build data-driven cultures in community colleges (see Figure 2.1) These inventories and models are meant to provide Achieving the Dream colleges with a better grasp on the characteristics and processes that can be used to help them in their efforts increase the level of student success on their campuses.

Figure 2.01: Data-Driven Processes for Achieving the Dream: Ten Steps

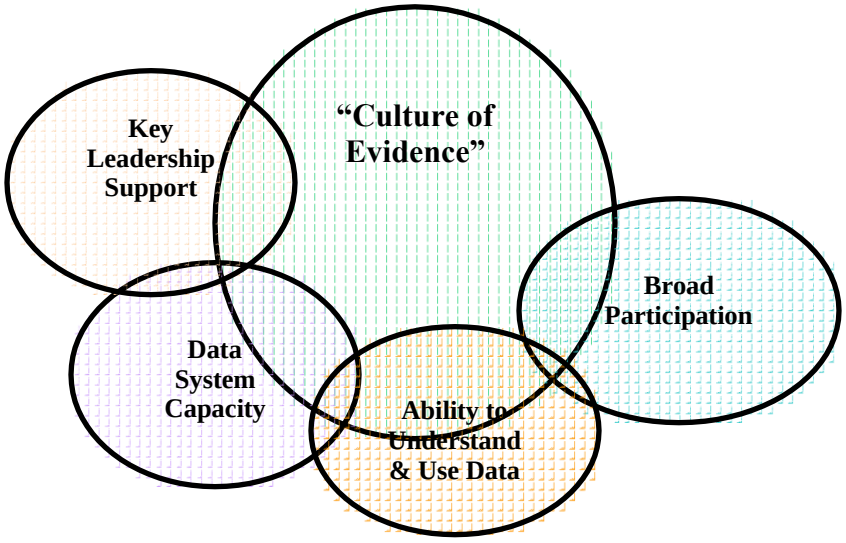


A FRAMEWORK DRAWN FROM THE LITERATURE

In exploring the development of a "culture of evidence" at two community colleges, this study draws from the literature on institutional culture and change, and on the use and definition of evidence in supporting change efforts. A "culture of evidence" is defined as "institutional and individual reflection and action…typically prompted and

supported by data about student learning and institutional performance" (McClenney and McClenney, 2003, p. 3), and the perceptions of college constituents of the progress made by their institutions in creating such a data-driven culture will be compared with the characteristics listed in the "Culture of Evidence" section of the *Community College Inventory*. Specifically, the study will look to see the extent to which perceptions of a "culture of evidence" have permeated throughout the institutions and the manner in which the concepts of key leadership, data system capacity, broad participation, and organizational members' understanding of and capacity to use data are manifested in these perceptions (see Figure 2.02).

Figure 2.02: A Theoretical Model of a "Culture of Evidence"



KEY LEADERSHIP

In any change initiative involving organizational culture, the involvement and support of key leaders can greatly influence the effectiveness of the adoption and implementation of change efforts. The relationship between leaders and culture is

important to understand, since this relationship plays out not only at interpersonal level but also at a cognitive level.

A Cognitivist Approach to Culture

Culture, or "the way we do things around here," is more complex than it may appear to be (Kezar and Eckel, 2002, p. 438). According to Lakos and Grey (2000), "culture matters because it is a powerful, latent, and often unconscious set of forces that determine both individual and collective behavior, determines strategy, goals, and modes of operating"(p. 170). Morgan (1998) concurs, noting that culture "can exert a decisive influence on the overall ability of the organization to deal with the challenges that it faces" (p. 122). Because of the power inherent in the cultures of organizations, these frameworks significantly influence change in institutions. Berquist (1992) explains that culture must be considered in all change efforts, because "change processes can be thwarted by violating cultural norms or enhanced by culturally sensitive strategies" (p 12). As previously mentioned, since cultures are unconsciously shared among constituents, they are often taken for granted and hard to change. As Hansen (2003) notes, the principle traits of organizational culture are "stability and consistency" (p. 63). Thus, culture is a powerful influence on change, but an influence difficult to manipulate.

For many years, cognitivism has been at the heart of efforts to understand the formation and development of culture. Cognitivism defines cognition as "information processing as symbolic computation—rule-based manipulation of symbols" (Varela, Thompson, and Rosch, 1991, p. 42). In this approach, the function of a complex system, such as an educational institution, is explained by "detailing the individual roles and the overall organization of its parts" (Clark, 1997, p. 104). That is, cognition occurs within the individual, and so an understanding of a particular culture would lie in understanding

what is happening in the minds of the individuals belonging to that cultural group. This understanding is obtained by identifying the symbolic representations "code[d] in the brains" of individuals (Varela, Thompson, and Rosch, 1991, p. 40). Once this understanding of the individual experience is obtained, it can be controlled and modified by other individuals, also known as leaders (Clark, 1997).

Cognitivism is Educational Literature

Understandings of institutional culture generally based on cognitivism are widespread in the field of education. Although these approaches don't explicitly note cognitive underpinnings, they do rely on focusing on symbolic representations and individuals. Drawing upon Geertz's (1973) assertion that "meanings are 'stored' in symbols" (Kuh and Whitt, 1988, p. 127), Dubrow (2004) divides organizational culture into two segments: form and substance. Forms of culture are defined as "the tangible manifestations of the beliefs, values, and assumptions that the members of an organization share about that organization" (p. 109). Examples of forms of culture include artifacts, rituals, ceremonies, and images. The substance of culture, on the other hand, is "the actual beliefs and values shared by members of the organization, the normative glue that binds the actions of the members of an organization to a specified but perhaps unspoken set of standards" (p. 109). Together, the forms and substance of culture construct the perceptions of an institution, as well as the "reality" upon which all interactions are based. Kuh and Whitt (1988) also posit that "guiding assumptions and beliefs…are manifested in observable forms or artifacts" (p. 112). Thus, to change institutional culture, one must manipulate the symbols or artifacts held by individuals.

Cognitivist approaches to cultural change emphasize symbolic representations found within an institution. Typically, institutions start to address culture by redefining

institutional mission and vision, prominent "symbols" of the work of a college. In fact, the "basic role of a mission statement is clear in [the] literature" and "suggests the primacy of mission" (Rowley, Lujan, and Dolence, 1997, p. 42). Roueche, Johnson, and Roueche (1997) note that most community colleges first address institutional change by "articulating the mission of the college" (p. 29), and many others agree this approach is common among other educational institutions and businesses (Thomas and Strickland, 1996; Matthes, 1993; Byars, 1991; David, 1991). Schachter (2005) also encourages institutions to have administrators (and sometimes faculty) review the mission and vision for accuracy in changing cultural norms. Once these symbols have been adjusted, the key then is to make them clear to all faculty and staff—placing them where they are visible—so that they come to "represent" institutional culture in the minds of individuals and individuals accordingly change.

Most importantly, cognitivist models underscore the importance of key individuals, such as institutional leaders, in adjusting symbols and artifacts and making these artifacts clear to all constituents. The assertion is that since cognition occurs in the minds of individuals, one individual can manipulate symbolic representations in an organization, and these changes to the symbols will filter down into the minds of individual employees if they are made prominent. For example, in *Good to Great*, Collins (2001) contends that the key to organizational change lies in the leadership ability of the chief executive officer. Much of the literature emphasizes the high level of influence over an organization held at the presidential level (Baker, 1998; Rippey, 1987; MacGregor Burns, 1978; Roueche, Ely, and Roueche, 2001). Thus, the executive administrative team in a college is seen as more important in cultural initiatives than the

general faculty and staff because these individuals hold a better understanding of and influence over the symbols upon which the culture is based.

Community colleges have a reputation of relying on top-down management structures (Thaxter and Graham, 1999; Parilla, 1993). Within these structures, college presidents and upper administrators are seen as playing key roles in providing leadership and direction to the institution. For example, Baker's Core Values Model (Baker, 1998) defines leadership as a core driver in dictating both outcomes and accountability (p. 2). Jazzar and Algozzine (2006) also emphasize the importance of an institution's leader in promoting institutional transformation and effectiveness. In addition, multiple studies cite the lack of strong institutional leadership as a barrier to institutional effectiveness (Ewell, 1989; Palomba and Banta, 1999; Levin, 1996). These findings fit well within the cognitivist lens, emphasizing the role of key individuals in directing the development (or lack thereof) of cultural shifts.

DATA SYSTEM CAPACITY

According to Roueche, Baker, and Rose (1989), "It is critical for an organization to know what business it is in" (p. 115). Organizations—including community colleges—need to know what they are doing and how well they are doing it. As Kim (2000) notes, in order for an organization to implement data-driven approaches, it "must minimize ambiguity and imprecision in interpreting shared information" (p 1). Love (2000) asserts that the use of data in decision-making processes provides multiple advantages in promoting change:

- Data can uncover problems that might otherwise remain invisible;
- Data can convince people of the need for change;

- Data can confirm or discredit assumptions about students and school practices;
- Data can get to the root cause of problems, pinpoint areas where change is most needed, and guide resource allocation;
- Data can prevent one-size-fits-all and quick solutions;
- Data can give schools the ability to respond to accountability questions
- Data can build a culture of inquiry and continuous improvement (p. 1).

Little is known, however, about the impact community colleges have on student learning. Outcomes in education have largely remained ill-defined and unknown through the unwillingness or inability of institutions to measure the results of the community college student's experience (Greene, 2005, p. 3). McClenney (2004a) notes that

> In the absence of systematic and reliable data about educational practice and student experience, members of the campus community have to rely on their own personal experience to judge the quality of undergraduate education at their institution (p. 20).

The reliance on personal experience, though, is highly anecdotal and rarely representative of the general population. Thus, the key to knowing how well an institution is doing lies in gathering reliable data. As Edgerton (1990) observed, institutions need a "mindset that asks questions—good questions, hard questions, legitimate questions" (as cited in Roueche, Johnson, and Roueche, 1997, p. 29). This institutional mindset, or "culture of evidence," relies on an institution's willingness to base decisions on data and to collect data that accurately inform decisions. The institution must have "a discernible mission, is producing outcomes that meet constituency needs, and can conclusively document the outcomes it is producing as a reflection of its mission" (Roueche, Johnson, and Roueche, 1997, p. 29). In other words, the better a college understands itself, the more effective will be its efforts will be to change. This process takes courage as colleges evaluate the

"incongruence between what a community college *says* and what it *does*" (Greene, 2005, p. 3).

Institutional Research Capacity at Community Colleges

Few community colleges, however, are structured to effectively monitor institutional outcomes. According to the Community College Research Center (CCRC) (Morest, 2005), only 27 percent of community colleges have 1.5 FTE or more dedicated to institutional research, while 26 percent of community colleges have less than a full-time position assigned to collecting and analyzing institutional data (p. 5). The CCRC also found that faculty participation in institutional research endeavors was very limited, with one quarter of colleges reporting absolutely no faculty involvement (p. 6). Roueche, Johnson, and Roueche (1997) found that

> Colleges are encountering considerable challenges in creating an institutional climate conducive to ongoing measurement of effectiveness. The number-one-rated issue related to institutional effectiveness for community colleges was staff commitment and willingness to evaluate college practices, listed by 36 percent of the respondents (p. 46).

Lachat (2001) contributes this lack of faculty commitment to institutional effectiveness to a perception of most faculty that data analysis is not part of their jobs nor a college priority. This perception is often substantiated by a lack of formal training on the part of faculty in data analysis or assessment (p. 23).

In addition, efforts dedicated to institutional research mainly focus on meeting state reporting requirements and preparing for accreditation visits, activities with a low emphasis on strategic analysis and a high concentration on documentation. Because of the limited IR staff and the heavy focus on reporting, few colleges regularly assess key indicators of student success, and even less disaggregate the results by race and socioeconomic status (Bailey et. al, 2004, p. 8). Without these data, colleges are ill-

prepared to change the status of the achievement gap in student performance—their stated mission and purpose.

Defining Quality Data

In order for community colleges to assess their level of effectiveness in promoting and supporting student success, they must collect "defensible data" that depict important milestones students have met and skills and knowledge they have mastered (Popham, 2005, p. 80). What "defensible"—or "quality"—data consist of, however, is not always clear to an institution. While there is growing agreement that student success should be measured, there is little agreement on what the measurements should be (Lachat, 2001, p. 21; Odom et. al., 2005). What educational research that does exist has been criticized for being "methodologically weak research, trivial studies, [having] an infatuation with jargon, and a tendency toward fads" (Thompson et. al., 2005, p.184). In this light, a discussion of what data provide quality evidence is useful.

Data Versus Information or Knowledge

Multiple studies make an important distinction between the terms "data" and "information" or "knowledge." Johnston and Kristovich (2000) define a "datum" as "an item's measurement," while information is the "user-directed presentation of that measurement" (p. 63). In this sense, data are considered raw and never contains their own explanation but must be interpreted to be explained. Dowd (2005) asserts, "We must understand that how we decide what information to collect, whom to involve in data interpretation, and how to communicate results can be as important as the results themselves" (p. 2). Information is "data with context," and context is by its very nature subjective in its formation (Johnston and Kristovich, 2000; Light, Wexler, and Heinze, 2005). Light, Wexler, and Heinze (2005) build upon data and information to define knowledge, which is "the collection of information deemed useful, and eventually used to guide action" (p. 3). Knowledge "is embedded in people" and is created "in the process

of social interaction about information" (p. 2). These authors posit six broad steps through which data are transformed into knowledge. First, data are in some form collected. These data are then organized and summarized in a cohesive format. With the boundaries of the data clearly defined, they are then analyzed and synthesized into overarching findings. Finally, these findings receive a value judgment and are deemed significant or insignificant in the decision-making process (p. 3). Thus, when discussing the quality of data, it is important to look at the process through which those data are collected, interpreted, and defined as knowledge.

Types of Data Collection

To build a data-driven environment, Friedman (2005) argues that "measurable system outputs…must be identified and system inputs…must be mathematically related to the outputs" (p. 2). Thompson et. al. (2005) conclude this is best done using the experimental model. As they note, "Definitive causal conclusions in quantitative research can only be reached on the basis of true randomized trials. That is what it is so important for educational researchers to conduct more true experiments" (p. 182). Other studies agree that the experiment model should be considered the "golden standard" in educational research (Dowd, 2005; Bailey et. al., 2005).

Morrison (2001), however, warns that the "faith" placed in randomized controlled trials as the main source of data in education "may be misplaced" (p. 69). He explains that the experimental model, in its definition, produces objective data devoid of context and focuses on linear phenomena, whereas learning and student success is strongly linked to context and is often non-linear in nature. Morrison also contends that controlled trials adopt a cognitivist perspective and are less compatible with approaches based on distributed cognition (p. 69). The League for Innovation in the Community College (2004) supported this view in a White Paper, claiming

> Assessment may be thought of as a tool kit, a varied and marvelous set of devices and instruments, each honed and calibrated to tackle a very specific problem. This set of tools on its own may be impressive, but without an understanding of how the tools can be applied, it cannot be used to its potential. In addition, the tool kit *without context* or purpose doesn't offer much help. It must be contextualized within the broader learning outcomes of a college before it can be applied successfully (italics added) (p. 4).

Thompson et. al. (2005) concede that "it is crucial to match research questions and research designs," and this means often the context of student success is best measured with nonexperimental designs (p. 182). These nonexperimental designs could include causal-comparative models, ethnographic models, single-subject designs, and case studies. Therefore, the exact model used in collecting and analyzing data is less important than the reasoning behind why the model was chosen. Both quantitative and qualitative approaches can provide insights into the effectiveness of an institution as long as the limitations and assumptions upon which these approaches are based are clearly understood by the researcher as well as those who will later analyze the data.

The Components of Quality Research

The quality of data is determined by the extent to which the researcher can document the rigor involved in collecting and analyzing the data. In this sense, "rigor" is used to describe a researcher's effort to account for the limitations, assumptions, and context within which the data were gathered (Creswell, 1998). Yore (2003) presents three important characteristics of data that a researcher must account for: the nature, verification, and the collection of evidence (p. 3). A researcher must make explicit the nature of the data—where they come from, what relationship the data have to the research question, and why the data were chosen. In doing so, the assumptions that underlay the study will be exposed (p. 3). Brooks (2005) claims that when these

assumptions are left undisclosed, the data can be misconstrued and result in irrelevant comparisons or generalizations.

Second, data users must be aware of how the evidence is verified for reliability and validity (p. 4). "Reliability" can be seen as answering the question, "does the measure mean anything?" and "validity" as answering the question, "does the data measure only the correct something that they are supposed to measure?" (Thompson et. al., 2005, p. 184). Yore (2003) lists the important aspects of data verification as they apply to both quantitative and qualitative approaches (See table 2.1).

Table 2.01: Ways of Verifying Data

Quantitative	**Qualitative**
Reliability	Dependability
Validity	Credibility
Significance	Believability
Objectivity	Confirmability

(Source, Yore, 2003, p. 4)

Quantitative data must be shown to be reliable, valid, significant, and objective, while qualitative data must be presented in a dependable, credible, believable, and confirmable way (p. 4). There is flexibility in how data are verified as long as it meets these criteria. When data users are unable to establish how the data have been verified, they are unable to judge the extent to which the data mean anything in relation to the questions being asked.

Finally, the quality of data can be established in reviewing how the data were collected (Yore, 2003, p. 4). Yore (2003) notes that "data collection influences the quality of evidence in that procedures should anticipate how the data are to be used and the appropriate dimensions of verification" (p. 4). A key part of explaining the collection of evidence is clarifying the unit of analysis. The unit of analysis is the level at which an organization is being studied: as an institution, as academic departments or subunits, or as a collection of individuals. Differences in units of analysis are significant—what is observed at the institutional level can be very different that what occurs among individuals within that institution. Odom et. al. (2005) warns that the "devil is in the details," meaning that outcomes are more likely to be vague and unreliable if the unit of analysis is unclear (p. 137). For example, the state of Florida inflated its graduation rates at community colleges by defining the unit of analysis as all college students when the measurement was really based on students who had completed at least 12 credit hours of college-level work (Status, 1996). To be effective, then, a community college must have the knowledge to determine how data are being collected and analyzed.

BROAD PARTICIPATION

Culture by its definition is a group experience, affected by myriad people that share its norms, values, and beliefs. Strauss and Quinn (1997) explain that when patterns of common, recurring schema are shared within a group of people, a 'culture' is formed (p. 7). Thus, "cultural groups are formed not just by physical proximity of individuals but by relative participation of individuals in each other's conceptual world" (Sharifian, 2003, p. 189). Within this framework, group interaction becomes paramount in creating cultural meaning and behavior. Likewise, shared experiences within a cultural group become foundational to further cultural interactions and understandings. In community

colleges, for example, much of institutional culture stems from common interactions between faculty members and the distinct student populations served by access institutions, from the institutions "situatedness" in the local community, and from common understandings of teaching gained by faculty in graduate school. Cultural differences also exist in each department, as well as between students, administrators, and faculty, since each subgroup shares more overlapping schemas than those shared by the aggregate whole (Kuh and Whitt, 1988).

Studies that emphasize the importance of participation in the creation of culture often see cognition as "a distributed representation…in which meaning is not captured by a single symbolic unit, but rather arises from the interaction of a set of units, normally in a network of some sort" (Eliasmith, 2001, p. 1). This approach, called connectionism, depicts cognition as a biological structure very similar to the brain, in which a network of neurons works interdependently to produce outcomes. Important to this understanding of cognition, or "culture making," is the idea that culture is first and foremost enacted (or not) through the activities and interactions of all agents, despite the level of influence held by executive leaders within the organization. For example, this means "that no matter what the President mandates as the lofty mission of the institution, if the grounds crew is underpaid and bitter, the leaves and trash will not be handled well. And if the faculty feel left out of decision-making processes, the teaching and thereby the success of students will suffer" (Syverson, 2005, personal communication).

Central to cultural models focused on "shared meaning making" is the belief that broad-based involvement must exist for institutional change to occur. For example, Birnbaum (2000) found that one of the most significant reasons management strategies fail is the lack of support for the strategies from a large number of faculty and staff. Other

studies concur that a lack of faculty commitment for an institutional intervention can stand as a serious barrier to successful implementation (Ewell, 1989, Paloma and Banta, 1999, Nichols, 1995). Nichols (1995) even goes so far as to call faculty resistance the most significant impediment to institutional effectiveness and change efforts.

On the other hand, Welsh and Metcalf (2003) conclude that "faculty support for institutional effectiveness activities is also likely to be increased by ensuring that faculty perceive that they are personally involved in institutional effectiveness activities" (p. 459). They present four characteristics to measure the extent to which faculty members are likely to buy into institutional initiatives: *internal versus external motivation, depth of implementation, definition of quality, and level of involvement*. First, faculty are more likely to participate in college improvement plans if they feel these plans are based on a sincere desire to improve the quality of the institution for its students, faculty, and staff, and not just on placating external demands for accountability (449). Second, faculty and staff tend to commit to new initiatives at the same level of dedication that they perceive the institution gives to the approach. If faculty and staff sense an initiative or strategy is superficial in nature, they are more likely to dismiss it as a "management fad" or "flavor of the week" (Birnbaum, 2000). Third, broad-based support for a strategy is contingent upon a common agreement on which types of data are valuable and which types of data aren't (p. 450). Finally, faculty resistance to institutional effectiveness plans is diminished when are viewed as integral participants in the planning and implementation process. As Welsh and Metcalf explain,

> When change originates with administrators, it is easy for the change process to evolve into an "us and them" situation where nobody is a winner. Thus it is important for administrators to involve faculty early in the change process and in a collaborative manner…Level of involvement was identified as an important factor in the successful implementation of institutional effectiveness programs in

> studies by Thomas (1997), McClure (1996), and Bonvillian and Dennis (1995) (p. 451).

Welsh, Nunez, and Petrosko (2005) also found that the level of involvement of faculty appears "to have the most important impact on support for strategic planning activities" of all the characteristics they studied (p. 32).

Shared Governance

In order to greatly improve the involvement of faculty members in the strategic planning and improvement efforts of the college, many institutions have experimented with "shared governance" models in which faculty groups are given more extensive decision-making power over institutional procedures and processes. Many studies supported this formalized structure of faculty involvement (Thaxter and Graham, 1999; Pope and Miller, 2005; Kater and Levin, 2005; Lucey, 2002; Gerber, 2001). However, shared governance structures have had limited success in increasing faculty support for institutional change strategies and plans (Birnbaum, 2004). Dimond (1991) and Kezar (2004) both note that shared governance strategies are often perceived by administrators, staff, and faculty as ineffective. Kaplan (2004) explains that a tension exists between "the need to preserve faculty authority and influence, and the need for decision-making systems that respond efficiently to change" (p. 23), implying that these two traits are mutually exclusive. Dobelle (1993) also adds that even where shared governance structures exist, "far few faculty take responsibility or seek accountability when these roles are available even though faculty often persist in arguing that they lack a meaningful role in institutional governance" (p. 65). Scott (1997) agrees that shared governance models are ineffective, arguing that while they account for formal structures, they don't take into consideration faculty apathy for participation in institutional governance. Thus, while some colleges have recognized the need to involve faculty in the decision-making processes of the institutions, no effective and clear model has arisen to do so.

The Importance of Communication

Tierney and Minor (2004) suggest that "to become more effective in governance, faculty should focus on communicative strategies in addition to structural form" (p. 85). They cite Lewis B. Mayhew's (1974) description of governance structures in modern-day institutions of higher education:

> In one sense the governance of [institutions of higher education] is governance by conversation. Many of the seemingly critical matters, such as the form of the curriculum or even the size of the budget…are the subject of thousands of hours of consultation and conversation before a final decision is ratified" (p. 58).

Mayhew's comment emphasizes the distributed nature of governance: it is through the interaction of multiple agents that meaning is formed and decisions made. Whether these interactions are made formal or remain informal, the key to distributed meaning-making lies in communication between constituents. Levin (1998) describes this process as *storytelling*:

> Organizational change in the community college is conveyed by storytelling: through descriptions and explanations that organizational members give to make sense not only of their organization but also of the relationship between the organization and its environment. (p. 44)

In order for the stories created by organizational members to accurately reflect the needs of students and the community it serves, these members must be "informed about the various issues having an impact on the college" so that the issues become interwoven into the shared consciousness of its members (Thaxter and Graham, 1999, p. 671). What faculty and staff are unaware of will remain absent in their perceptions and subconscious in the organization's culture. Communication between constituent groups, however, is often a struggle for any organization, including community colleges. As Tierney and Minor (2004) discovered in a study of institutions of higher education, while administrators tended to believe their institution maintained good levels of communication between constituent groups in their decision-making processes, faculty

members at their institutions were far less likely to agree. Until administrators, faculty, and staff feel that the quality of communication at their institution is high, the college's efforts to understand and changing institutional culture will be limited.

UNDERSTANDING AND USING EVIDENCE

Crucial to an institution's ability to use data as knowledge is a generally shared knowledge about data. Bailey and Alfonso (2005) argue that colleges "should search [for information] critically, recognizing that all research is not the same and that even the most definitive studies…have limitations" (p. 29). When data users understand the nature, verification, and collection of data presented to them, they will be able to judge the value of the data and their relevance to promoting student success. Only when data users can make these sound judgments will the use of data become powerful in transforming institutions. Thus, the ability to make this skilled assessment of data needs to be held by the majority of an institution's constituents, not just a handful of research professionals. Before data can be made into knowledge, an organization's members must be knowledgeable about data.

There is little written in the literature on the need for a broad understanding of statistical and research knowledge among all college constituents. Interestingly, while much has been written on the need for institutions to have capacity (knowledge and resources) to develop and maintain data systems, as well as on the need to involve constituent groups at all levels of decision-making and planning processes, few articles have linked these two components together. Hoff (2005) notes that more secondary institutions across the nation are adopting data systems designed to be put student and institutional performance data at the fingertips of teachers, signaling a move away from data systems only accessible by administrators and district personnel. McIntire (2005)

also contends that true transformative institutional change requires faculty to understand and apply data in their classrooms at the class and individual level. He cites an example of such a system:

> Sharif El-Mekki, principal of Anna T. Shaw Middle School in Philadelphia, conducts monthly ABCs or Administrative Benchmarks Conferences with his teachers. At these conferences, each teacher presents an analysis of the month's formative assessment data, a summary of their findings, and an action plan for addressing the student learning needs identified. By asking guiding questions about general trends and specific students, El-Mekki coaches his teachers through the difficult task of customizing teaching to meet the learning needs of all students. Following the ABCs, assistant principals and team leaders meet with groups of teachers to tackle thorny problems, share best practices, and collaborate to address general findings. The result is a school where every teacher is highly conversant about specific performance details of their students (p. 25).

These authors note that, at least the secondary level, a broad understanding of knowledge of data systems is crucial in infusing a data-driven approach into the core of an institution.

CONCLUSION

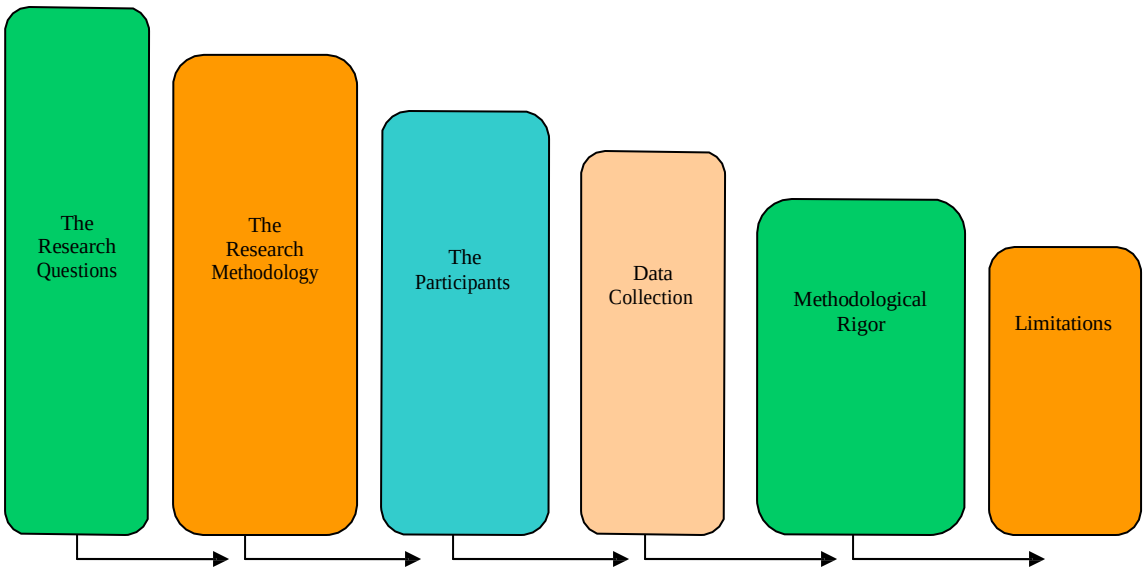
It is important in institutional change efforts to understand the significance of culture and the importance of group interaction in meaning-making within the organization. In order to learn how an organizational culture based on data-driven processes can be fostered, institutions must look at the role of the leader in defining interactions at the institutions, the involvement of constituents in culture-formation around data usage, and the skills and knowledge constituents hold in recognizing and applying quality data. When these aspects of institutional culture are uncovered and discussed, the findings can lead to a greater awareness of barriers and strengths present in the institution's efforts to create a "culture of evidence." The findings can also provide insight into how other institutions can examine their own processes and communication patterns in promoting data-driven change.

Chapter 3: Research Methodology

INTRODUCTION TO THE RESEARCH

This chapter lays forth the methodological underpinnings of the study: the scope of the research, the research methodologies upon which the study is based, and the role of researcher and participant in the collection, analysis, and interpretation of data. It also addresses the issue of rigor, which maintains the claims of dependability, credibility, believability, and confirmability in the findings of the study. Figure 3.01 provides a visual representation of the organization of these components.

Figure 3.01: A Model for the Organization of Chapter 3



THE RESEARCH QUESTIONS

Framing a Study

According to Singleton and Straits (2005), "Research begins with a question or problem" (p. 69). In studying this question or problem, research questions arise as the

researcher decides "more specifically what one wants to know and for what purpose one wants to know it" (p. 69). Marshall and Rossman (1989) emphasize the importance of making the purpose of research explicit, thereby showing the value inherent in asking and answering the research questions, specifically as it relates to transferable knowledge development (p. 23). The research questions of a study, then, create a framework in which experiences and phenomena are organized in such a way as to inform a greater understanding of those experiences and phenomena within the larger context. Either narrow or broad in scope, research questions create a lens through which connections between experience and phenomena are made visible.

Harrell (2004) argues that qualitative studies should answer three questions: (1) "What are the components of the phenomenon being studied?" (2) "How do the components related to each other in a perceptual system?" and (3) "How do multiple systems compare in terms of components?" (p. 50). Research questions based on these three queries should then be tested for "adequacy" against two criteria: "What problems do these questions, taken as a whole, address?" and "Is this the problem we should be addressing?" (p. 50). In exploring the framework of this study, the research questions will be compared against Harrell's three basic questions and the two criteria set to measure adequacy.

The Research Questions

Through an inductive approach, this study addresses the phenomena of a "culture of evidence"—the environment of an institution in which "institutional and individual reflection and action are typically prompted and supported by data about student learning and institutional performance" (McClenney and McClenney, 2003). Key to this concept of a "culture of evidence" is institutional culture, which consists of the perceptions of

constituents of the culture and the processes and products those perceptions create. As a part of the Achieving the Dream Initiative, many colleges—including the two in this study—have involved administrators, faculty members, and staff from their colleges to different extents in dialogue about the creation of data-driven decision-making and planning processes. Thus, an examination of how these administrators, faculty members, and staff involved in the creation of a "culture of evidence" perceive this phenomena, along with the extent to which these perceptions have permeated the ranks of administrators, staff, and faculty members across the college, can provide a better understanding of the institutional characteristics that contribute to the institutionalization of data-driven practices and the characteristics that inhibit a "culture of evidence's" development. To that end, the following questions were addressed:

- How do faculty, staff, and administrators on the college's Achieving the Dream Core and Data teams perceive the presence of a "culture of evidence" at their institution, as defined by the *Community College Inventory*?
- What is the understanding of the faculty, student services, and administrator team members of a "culture of evidence"? What do they perceive are the characteristics at the institution that either contribute to or inhibit the development of a data-driven culture? How do they perceive the system of relationships that exists between these characteristics?
- How do faculty, staff, and administrators not directly participating in the colleges' Achieving the Dream efforts perceive the presence of a "culture of evidence" at their institution, as defined by the *Community College Inventory*?
- To what extent has the system underlying a "culture of evidence" at the institution, as perceived by the Core and Data team members, permeated the

perceptions of faculty and administrators at the college not directly participating in the Achieving the Dream process?

In addressing the standard research questions as proposed by Harrell—what are the components of the study and how to these components relate to each other in a perceptual system—administrators, faculty members, and staff at each of the two colleges participating on the college's Achieving the Dream Core and Data teams were asked in focus group settings to articulate the components of the phenomenon, in this case a "culture of evidence" as defined by the *Community College Inventory.* This process also allowed for these participants to explain how each component relates to each other within the system, or their institution. The components and their interrelationships articulated in each of the two focus groups were compiled into a composite list. This list was then shared with administrators, faculty members, and student services professional from the college not directly participating in the college's Achieving the Dream efforts, who also reflected on the identified components and explained their own perceptual system of relationships between components. Finally, the components articulated at one college were compared to those developed at the other college, and the researcher explored the similarities and differences that arise at each institution.

In testing these research questions against the "adequacy" criteria presented by Harrell—what problems do these questions, taken as a whole, address, and is this the problem we should be addressing?—the study probes the complex relationship between change initiatives and institutional culture, focusing on how the establishment of data-driven cultural norms is influenced by the cultural perceptions of college constituents. The benefits of such a focus are twofold. At the institutional level, a review of the similarities and differences in the perceptions of the development of a "culture of

evidence" between college constituents directly involved in its creation and constituents more peripheral to the implementation can help each institution to identify strategies that have been successful in promoting the consistent use of data at the college as well as gaps in the understanding and adoption of data-driven cultural norms across campus. The examples of institutional reflection at these two colleges can also help other colleges in their efforts to better grasp how organizational culture at their institutions influence the adoption of data-driven cultural norms. As more community colleges buy into the importance of a "culture of evidence" in improving student and institutional outcomes, models and processes that address what influences the development of a "culture of evidence" will be instrumental.

THE RESEARCH METHODOLOGY

Rationale for Choice of Methods

In order to study culture, one must capture the perceptions of constituents from that culture, revealing what Flannigan (2005) calls "socially agreed upon knowing" (p. 68). To do this, elements from Interactive Qualitative Analysis (IQA) were drawn upon. This study also recognized the unique nature of culture within an institution, and therefore approached the collection of data at the two institutions as single case studies. This means that while the study's framework was built upon the perceptions of the participants at each college, the researcher attempted to ground these perceptions within the context of the institution. To do this, a broader group of college constituents was surveyed as to their perceptions of the presence of a culture of evidence at their institution, thus providing an institutional perception of the concept against which the views of the focus group participants can be compared.

IQA

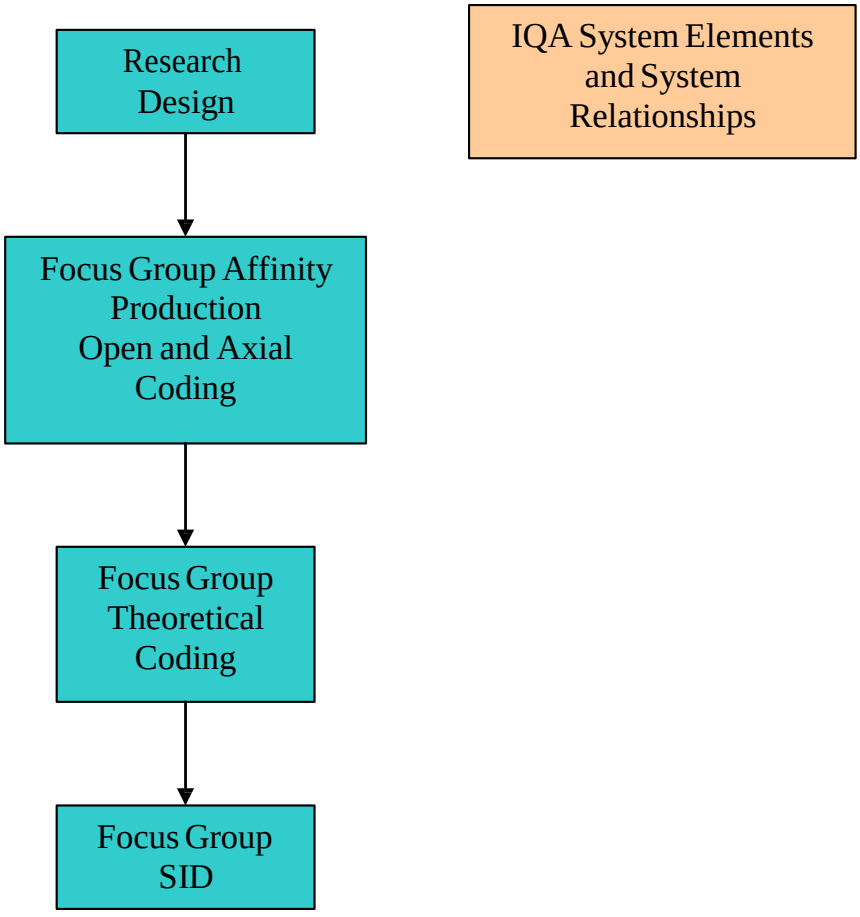
IQA provides a systematic approach to understanding how cultural phenomena are perceived by members of an institution through limiting the impact of the researcher's world view on the collection and analysis of data. This research approach was developed by Northcutt and McCoy (2004), and portions of this section reflect information taken from their text, *Interactive Qualitative Analysis: A Systems Method for Qualitative Research*, which outlines the process of IQA.

IQA prompts study participants to describe a distinct phenomenon by explaining what the phenomenon means to them, how they were led to this conclusion, and what the results or outcomes are of this perception. Participants guide the development of data collection by organizing their discourse into categories of meaning called *affinities* and then by analyzing the relationships they perceive exist among the different categories. The role of the researcher is to "create a process that will invite the group members to produce the most data while minimizing the influence of the process on the content" (Harrell, 2004, p. 47). The researcher acts as a facilitator, providing the framework in which participant discourse will occur while teaching the participants how to take control of the process. As Northcutt and McCoy (2004) explain,

> The purpose of an IQA study is to allow a group to create its own "interpretive quilt" [of meaning]…The quilt is represented as a system of patches (affinities) held together by stitches (relationships among affinities). In plain language, an IQA study prompts participants to examine these issues with respect to a phenomenon important to them: What does this mean to you? What led to this? What are the results? (p. 43).

This study drew upon the first elements of IQA in which affinities are formed and perceived relationships assigned by college participants. Below is a figure of the flow of this portion of the study. More details of the steps taken in these elements of IQA are discussed in the section on data collection

Figure 3.02: Research Flow—System Elements and Relationships



Case Study

As a research strategy, "the case study is used in many situations to contribute to our knowledge of individual, group, organizational, social, political, and related phenomena" (Yin, 2003, p. 1). Case study research is considered to be "qualitative descriptive research" in that it seeks to depict the experiences and perceptions unique to a given individual or group (Lauer and Asher, 1988, p. 23). There are different types of case study research. Stake (1995) divides case studies into two categories: *intrinsic* and *instrumental*. In intrinsic case studies, the focus of the research is on learning in detail about a particular case for the pure sake of understanding it as single situation.

Instrumental case studies, on the other hand, seek to gain insight into phenomena and experiences shared by a larger group of individuals or organizations through the study of one such group member (p. 3). Drawing upon these definitions, this study was instrumental in nature, as it sought to expose relationships between constituent perceptions and processes and products within a culture, relationships other institutions could explore within their own organizational contexts.

Yin (2003) contends that

> case studies are the preferred strategy when "how or "why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context (p. 1).

This study, as supported by Yin, fits well within the context of case study as a preferred strategy. First the research questions are predominantly "how"-based: *How do faculty, staff, and administrators on the college's Achieving the Dream Core and Data teams perceive the presence of a "culture of evidence" at their institution, as defined by the* Community College Inventory*? How do faculty, staff, and administrators not directly participating in the colleges' Achieving the Dream efforts perceive the presence of a "culture of evidence" at their institution, as defined by the* Community College Inventory*?* Second, as an outside observer, the researcher has little control over the development of a "culture of evidence" at either institution, and even less control over how the phenomena is perceived by constituents of each organizational culture. Finally, the concept of a "culture of evidence" has very recently gained attention in the world of community colleges, and its implementation is a "real-life" endeavor adopted by these colleges through their involvement in the Achieving the Dream initiative. Therefore, the use of an instrumental case study design seems fitting in gaining insight into these colleges' experiences with the development of data-driven cultural norms.

THE PARTICIPANTS

The Research Sites

The Studied Community College District

The Studied Community College District (SCCD), in Bexar County, Texas, is composed of four colleges and two campuses spread across the city of San Antonio. The four colleges offer associate degrees (AA and AS), certificates, and licensures in occupational programs supporting workforce development in the county. In 2003-2004, SCCD served 88,742 students, with 72,729 students enrolling in credit courses and 16,013 students taking continuing education courses (SCCD Website, *About SCCD*). Of those students new to SCCD in 2003, 56 percent were female and 44 percent were male; 38 percent were also white, 8 percent were Black, and over half were Hispanic (51%) (SCCD, 2005, p. 1). Almost three-quarters of these students also placed into a least one level of developmental math (p. 2).

In 2004, SCCD joined the Achieving the Dream initiative as the only individually accredited, multi-college participant (while there are other multi-college institutions participating, they are all accredited as one institution, not as individual colleges). The district's goal was to form a unified approach among the colleges in increasing the success of their low-income students and students of color while balancing the traditional autonomy each college possessed. The first step of this approach was to standardize across the district "the processes by which qualitative and quantitative data for measuring student success were (and are) collected and analyzed and…to ensure the accuracy and consistency of the actual data common to each college" (SCCD, 2004, p. 2). To do this, SCCD created five "Core" teams and five "Data" teams—one of each representing each college and one of each coordinated at the district level—composed of more than 80

college and district administrators, faculty, and staff (p. 3). Core teams were made responsible for the general coordination and advancement of the Achieving the Dream initiative at their respective colleges and within the district, while Data teams were charged with improving the availability and use of data supporting the initiative. The district also extensively involved "professionals in information systems design and management, student support services, grants development and management, and all administrative and operational support functions" by linking Achieving the Dream to the district's district-wide planning process surrounding the conversion to an upgraded Banner information system (p. 3). SCCD hoped that the "broad-based involvement [would] produce a comprehensive, integrated information system with common data definitions, rules and elements that will underlie the focus upon a culture of evidence for decision-making" (p. 3).

The Studied Community College District identified five student outcome indicators: (1) successful completion of remedial courses and progression to college-level courses; (2) enrollment and successful completion of college-level "gatekeeper" courses; (3) productive grades (C or higher) in all courses; (4) semester to semester persistence; and (5) graduation. In addition, SCCD has added student engagement as an indicator as measured by the Community College Survey of Student Engagement (*CCSSE*). Based upon the data from these indicators, SCCD adopted four district-wide strategies to improve low-income student and student of color performance:

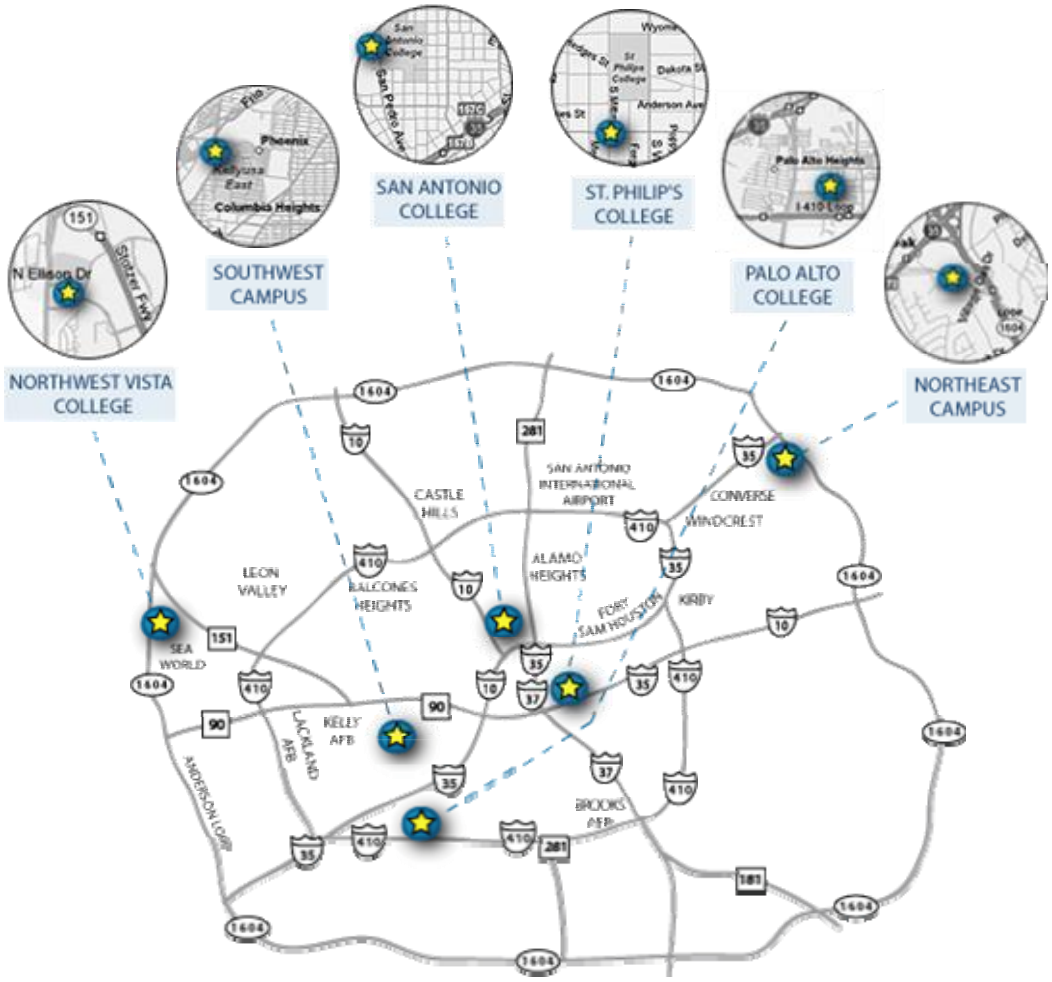
- Increase the success and progression of students in developmental math courses;
- Improve the persistence of "first time in college" (FTIC) students ;
- Increase students' successful completion of gatekeeper courses (College Algebra, Freshman Composition, and U.S. History);

- And develop and maintain a "culture of evidence" from which to base decisions.

The fourth strategy, "develop and maintain a 'culture of evidence' from which to base decisions," is meant to improve student outcomes by making decisions that effect student learning, such as resource allocation and service delivery decisions, more effective through "the consistency of data" (p. 5). This will be achieved by creating a data infrastructure that supports the gathering and analysis of data as well as the dissemination of findings. The institutional culture will support the constructive analysis of student outcome data and the sharing of data throughout the district (p. 22). SCCD's goal is within four years to have "faculty, staff and other stakeholders utilize student data…to revise curriculum, determine professional development activities, determine budget requests and update strategic planning" (p. 22).

While district-wide task forces have been formed for each of the four initiative strategies, each college's Core and Data team have been charged with the responsibility of implementing these strategies on their campuses. This study will specifically look at two of the four colleges—College Two, and College One.

Illustration 3.01:The Studied Community College District



College One

In responding to the growing population in the southern section of San Antonio, the community college district's chancellor, Dr. Byron McClenney, established College One in the region in 1983. College One is federally designated as a Hispanic-Serving Institution (HSI), with 67 percent of its 7,055 students being of Hispanic descent (Texas Higher Education Coordinating Board, 2004, p. 13). Of College One's remaining students, 29 percent are white and 2 percent are Black. The average of students at the college is 24, and almost two-thirds of the student body is female (p. 13). Three-quarters

of College One's students are enrolled in coursework leading to an AA or AS degree, while one quarter of students are involved in professional technical programs.

Of the 1,717 full- and part-time first-time-to- College One students in the fall of 2003. 42 percent were male and 58% female (College One, 2004b, p. 1). The percentage of male students in the cohort is a bit higher than that of the general student population—almost an 8 percent difference. The ethnicity of the student cohort, however, is similar to the larger student population, with 64 percent being Hispanic, 33 being white, and 2 percent being Black.

Figure 3.04: College One Fall 2003 Cohort Gender and Ethnicity

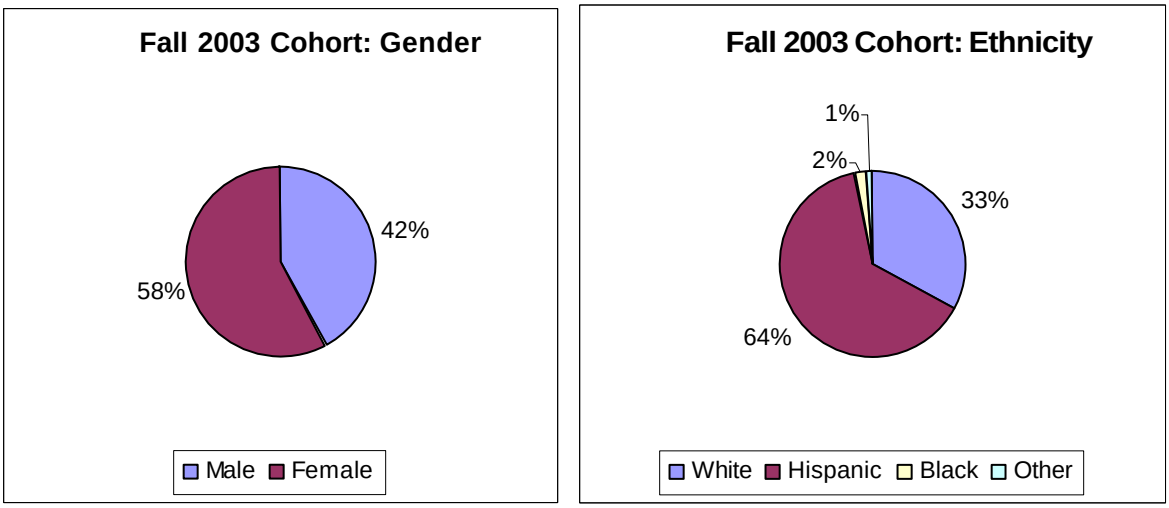


Table 3.02: College One Fall 2003 Cohort Academic Preparation Levels

	Math	English	Reading
Student Placement Level			
One Level Below College Level	10%	15%	5%
Two Levels Below College Level	13%	5%	11%
Three+ Levels Below College Level	50%	--	19%

Seventy-three percent of College One's Fall 2003 first-time-in- College One cohort placed into at least one level of developmental math, 20 percent placed into a level of developmental English, and 35 percent placed into at least one level of developmental reading (College One, 2004b, p. 2). During the 2001-2002 school year, College One awarded 323 degrees and 88 certificates (Texas Higher Education Coordinating Board, 2004, p. 13). Of those students who graduated, 60 percent were economically disadvantaged, 20 percent reported themselves as being academically disadvantaged, and 10 percent were single parents (College One, 2005, p. 1).

College One upholds four core values: *Student success, Quality of Instruction, Commitment to Community,* and *Appreciation of Diversity*. These values are aligned with the mission of the college: "to educate, nurture, and inspire students through a dynamic and supportive learning environment, which promotes the intellectual, cultural, economic and social life of the community" (College One, 2004a, p. 6). In addition to the five outcome indicators adopted by SCCD through the Achieving the Dream initiative, College One has added transfer rates as a sixth outcome indicator. This additional outcome indicator is a sign of College One's commitment to meeting the specific needs of its community and the autonomous nature of the institution.

College Two

College Two officially opened in 1995 as one of the newest additions to the Studied Community College District. Located in the northwest corner of San Antonio, College Two had a student headcount of 7,099 for the fall 2004 semester, with an average student age of 23 (Texas Higher Education Coordinating Board, 2004, p. 12). Forty-five percent of College Two's student body is white, another 45 percent is Hispanic, and 5 percent in Black. Ninety-four percent of students are involved in coursework leading to an associate degree or transfer to a four-year institution, while 6 percent are involved in

technical professional programs. Sixty percent of students at the college are female and 40 percent are male.

The overall demographics of College Two are reflected among the students at the college for the first time in 2003—a longitudinal cohort identified in the Achieving the Dream initiative. The majority of incoming students are still female, about forty-five percent of the group is white, and six percent is Black. However, a larger portion of these students are Hispanic—47 percent as compared to 45 percent.

Approximately 87% of this cohort—2,136 students—took a test for college placement purposes, and 72 percent tested into at least one level of developmental math, ten percent into developmental English, and 25 percent into at least one level of developmental reading (College Two, 2005a, p. 2). In 2001-2002 school year, College Two awarded 85 degrees and 21 certificates (Texas Higher Education Coordinating Board, 2004, p. 12). Of these graduates, almost three-quarters were economically disadvantaged (qualified for federal financial aid), 20 percent "consider[ed] themselves to be 'academically disadvantaged,' and almost ten percent report being single parents (College Two, 2005b, p. 1).

Figure 3.03: College Two Fall 2003 Cohort Gender and Ethnicity

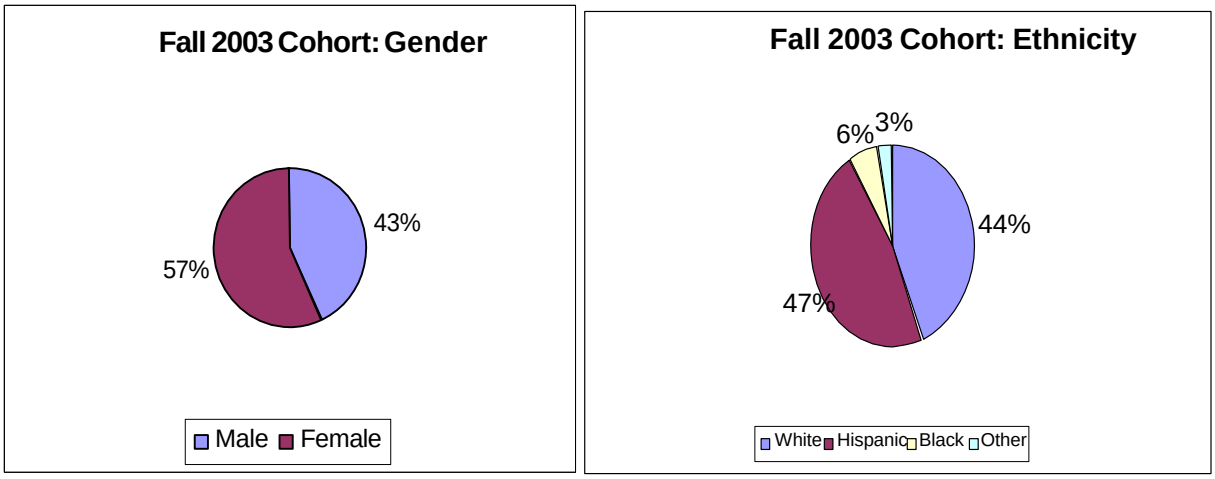


Table 3.01: College Two Fall 2003 Cohort Academic Preparation Levels

	Math	English	Reading
Student Placement Level			
One Level Below College Level	19%	7%	15%
Two Levels Below College Level	16%	3%	6%
Three+ Levels Below College Level	37%	--	4%

College Two's mission is to serve the northwest quadrant of Bexar County, Texas, and in doing so "be characterized by innovative learning systems, accessible scheduling, and the effective use of learning technologies" (College Two Website, 2006, *Mission, Vision, and Values*). The vision statement of College Two is: "To become responsible members of our world community, we create exemplary models for: *Learning to be, Learning to work, Learning to serve, Learning to Lead…Together*." Displayed across the college are the values of the institution, including learning, creativity, community, openness, caring, integrity, synergy, joy, and diversity. The college continues to grow, and its "expansion is guided by a 20-year, four-phase plan to

accommodate a projected enrollment of 11,500 [students] by the year 2015" (College Two Website, 2006, *History of College Two*).

The Participants

Sampling

Sampling is the "method used to select a given number of people from a population" (Mertens, 1998, p. 253), and as Hicswa (2003) explains, "[Sampling] influences the quality of data and the inferences that can be made from it" (p. 47). In choosing who will participate in a study, it is important to consider how close different constituents are to the problem being explored and how much power they have over the phenomenon (Harrell, 2004, p. 50). Northcutt and McCoy (2004) argue that "constituents may be conceived as existing on a continuum based on distance from the lived phenomenon," and the richness of a participant's expressions of a phenomenon will be relative to where she lands on that continuum (4:4). With this in mind, this study relied on purposive sampling in order to capture the perceptions those college constituents who were closest to the creation of a "culture of evidence" who held the greatest amount of power over the phenomenon's development. Participants in the study consisted firstly of administrators, faculty members, and staff serving on the Achieving the Dream college Core and Data teams at College One and College Two. These team members had presumably had the most exposure to the development of and discussions around the college's "culture of evidence," and they also were charged with its implementation across the colleges' campuses. However, since the institutionalization of any concept into the core of an organization's culture implies a broader adoption of the concept by the organization's members, a group of administrators, faculty members, and staff not directly involved in the Achieving the Dream initiative were also purposively selected in order to gauge the extent to which aspects of the "culture of evidence" had been integrated into the cultural norms of the institution. These constituents not involved with

the initiative's college teams made up the composition of the focus groups held during the second stage of the of the study, and were purposely selected so as to represent a diverse sample of departments and programs across campus.

DATA COLLECTION

Data were collected in this study through three steps: through the use of a short, college-wide survey; through a first round of IQA focus groups with members of the college's Core and Data teams; and through a second round of IQA focus groups, drawing upon the ideas generated in the first round of focus groups, with college constituents not involved directly involved in the Achieving the Dream initiative.

Stage 1: College-Wide Survey

The purpose of this study is to better understand the perceptions of college constituents regarding the concept of a "culture of evidence." This study bases the definition of this term on the criteria set forth in McClenney and McClenney's (2003) *Community College Inventory.* In order to ground the discussions of participants in this specific definition of the concept, the section of the *Community College Inventory: Focus on Persistence, Learning, and Attainment* on identifying a "culture of evidence" was posted in the format of an online survey, and all constituents of the college were invited to respond. The researcher used each college's email distribution system to send an invitation to all college faculty and staff. The results were disaggregated by employee type. The compiled findings from the survey were also compared to the responses of the focus group participants, who completed the survey during the warm-up activity in the focus group session.

Table 3.03: Community College Inventory Survey

CULTURE OF EVIDENCE: Institutional and individual reflection and action typically prompted and supported by data about student persistence, student learning and institutional performance.

	0	1	2	3	4
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	○	○	○	○	○
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:					
a. Student persistence	○	○	○	○	○
b. Student learning	○	○	○	○	○
c. Student attainment (certificates, degrees, transfer)	○	○	○	○	○
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	○	○	○	○	○
4. The institution regularly collects, analyzes, and reports data pertaining to the following:					
a. Successful completion of remedial/developmental courses	○	○	○	○	○
b. Developmental students' success in entry-level college courses	○	○	○	○	○
	0	1	2	3	4
c. Successful completion of selected gatekeeper courses (e.g., high-enrollment/high failure rate courses such as college algebra, freshman composition, anatomy and physiology, etc.)	○	○	○	○	○
d. Rate of successful course completion for all courses (C or better)	○	○	○	○	○
e. Student persistence—re-enrollment from one term to the next	○	○	○	○	○
f. Completion of certificates and associate degrees	○	○	○	○	○
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:					
a. Gender	○	○	○	○	○

b. Race/ethnicity	○	○	○	○	○
c. Income level	○	○	○	○	○
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	○	○	○	○	○
7. The results of student and institutional assessments are used routinely to inform institutional decisions regarding:	○	○	○	○	○
a. Strategic priorities	○	○	○	○	○
b. Resource allocation	○	○	○	○	○
c. Faculty and staff development	○	○	○	○	○
d. Improvements in programs and services for learners	○	○	○	○	○
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	○	○	○	○	○

Stage 2: IQA Focus Groups with Achieving the Dream Core and Data Team Members

The second and third stages of the study consisted of IQA focus groups. Focus groups are typically the second phase of an IQA study. Once the phenomenon being studied is determined in the research's design, the perspective of participants is elicited through highly interactive group interviews. At the core of focus groups is an emphasis on participation, and using focus groups a unit of analysis is appropriate "when the researcher is interested in how individuals form a schema or perspective of a problem" (Mertens, 1998, p. 174). Focus groups allow for interaction between individuals within a group, thus lending to the idea that knowledge is socially constructed through the interactions of group members (Varela, Thompson, and Rosch, 1991).

The IQA focus groups in the first round were composed of five steps: describing the process to the participants, warm-up and nominal group process, open coding, axial

coding, and theoretical coding leading to the construction of Interrationship Figures (IRDs) and Systems Influence Figures (SIDs).

Description of the Process

The focus groups began with a welcome and a brief introduction by the researcher. The researcher then provided a short summary of the study, reviewed and collected participant consent forms, and described the process of the focus group with its intended outcomes. Once this is done, participants were invited to ask clarifying questions they might have as to their role in the process. The researcher then proceeded to introduce the warm-up activity and nominal group process.

Warm-Up and Nominal Group Process

As the first part of the warm-up, participants were given a copy of McClenney and McClenney's (2003) "Part II: The Culture of Evidence" portion of the *Community College Inventory: Focus on Persistence, Learning, and Attainment.* Each participant was asked to silently complete the inventory section as it related to their institution and then to give the finished copy to the facilitator. Completing this inventory had a two-fold purpose: first, it provided a basis against which to compare the later perceptions of participants regarding the concept of "culture of evidence" at their institution by establishing if these participants believed such a culture was evident or not at their college. Second, the inventory provided a framework for the discussion of data-driven cultures, a concept that can be broad in nature. The inventory outlined general characteristics of a data-driven culture that guided participants in thinking about the concept but did not include specific strategies or processes that might have limited later discussion.

Through a guided imagery process, participants were then asked to relax, close their eyes, and focus on what the term "culture of evidence" meant to them and the

college. The following statements were posed to the group: What is a "culture of evidence?" How do they feel about a "culture of evidence"? What characteristics of the institution contribute to or hinder the development of a "culture of evidence"? What are key issues they might consider? After this, participants engaged in silent nominal brainstorming by writing down one idea per index card relating to the phenomenon. Starting with the silent brainstorming activity "ensures authenticity and individuality of thoughts and reflection about the issue statement" (Northcutt and McCoy, 2004, p. 46).

When participants finished writing their thoughts on index cards, they were instructed to tape each card to the wall where it could be seen by the rest of the group. Through a group discussion, the researcher then read each of the cards out loud for the entire group to consider. The purpose of this step was to reduce vagueness or ambiguity by arriving at a "socially constructed, shared meaning of each card among the members" (Northcutt and McCoy, 2004b, p. 5:5). As consensus was formed as to the meaning of each card, anyone in the group was allowed to offer an opinion, as the ideas on the cards belonged to the group and not to just the card's originator. When all of the cards had been clarified, the researcher gave the group time to capture any additional ideas around the phenomenon that arose during the process and then read these cards aloud as well.

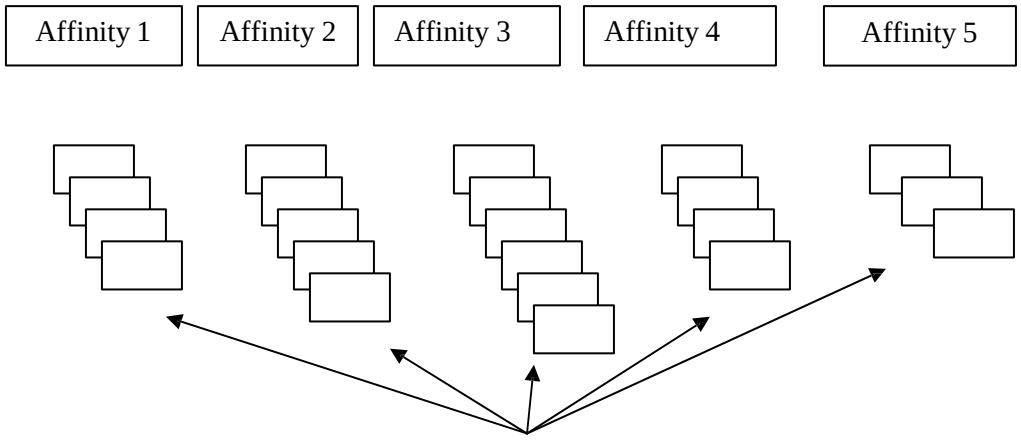
Open Coding

Open coding "seeks to identify…themes by clustering similar responses into groups called affinities" (p. 5:7). Participants were instructed to review the cards of the wall and then silently create clusters or cards in whatever categories they believed the responses suggested. While cards could be rearranged by any member of the group, participants were told not to defend their clustering of cards but just to move the cards into groups of similar ideas. If there was a disagreement where a card should be placed, a copy of the card was created, and the idea was placed in both categories.

Axial Coding

Once all of the cards had been placed in clusters, the researcher invited the group to name each cluster, or *affinity*. As names for the groupings were discussed, the researcher encouraged the group to narrow the meaning of the affinities, dividing affinities or creating sub-affinities where necessary. The participants "refine" the names of the affinities until "each participant agrees that each category name and definition accurately reflects the meaning of the affinity" (p. 5:9). These affinity names were placed at the top of each column of responses and eventually formed an affinity figure.

Figure 3.05: Focus Group Affinity Clusters



The researcher later drew upon the group's discussion in defining the affinities in order to write up a descriptive paragraph for each affinity, emphasizing details, contrasts, comparisons, and richness from the quotes and examples of the group.

Theoretical Coding

The purpose of IQA is to "draw a picture of the system (Systems Influence Figure or SID) that represents the perceptual terrain or the "mind map" of a group with respect to a phenomenon" (Northcutt and McCoy, 2004, p. 6:1). The SID is "a picture drawn using a set of rules for rationalization on a summary of the theoretical codes produced by the focus group called an Interrelationship Figure (IRD)" (p. 6:1). An IRD shows cause-and-effect relationships among the affinities as perceived by the participants and is based

upon only three possible relationships between affinities (A and B): either A directly influences B, or B directly influences A, or there is no direct influence between A and B. These relationships, known as the "Rules for Hypothesizing," are summarized below.

Figure 3.06: Rules for Hypotheses

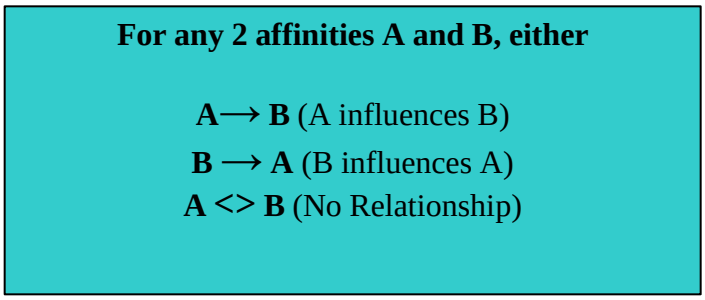


Table 3.04: Sample Focus Group Affinity Relationship Table (ART)

Focus Group Affinity Relationship Table	
Affinity Pair Relationship	**IF/THEN Statement of Relation**
1 <> 2	
1 → 3	
1 ← 4	
1 → 5	
2 → 3	
2 ← 4	
2 <> 5	
3 ← 4	

Affinity Name:

1. **A**
2. **B**
3. **C**
4. **D**
5. **E**

The researcher listed every possible paired combination for the generated affinities and the focus is group was asked to determine the nature of the relationship between them. The focus group then voted on the relationship of each paired affinity, and the researcher recorded the results. With this information gathered, the focus group was concluded.

Once the Affinity Relationship Table was complete, an Interrelationship Figure was created. The affinities were then sorted in delta order, and *Drivers* and *Outcomes*

were labeled. A Driver is an affinity with more influences on other affinities, or *Outs*, than influences from other affinities, or *Ins*. An Outcome, on the other hand, has a higher number of influences from other affinities and a lower number of influences on other affinities.

Table 3.05: Sample Interrelationship Figure (IRD)

Tabular IRD

	1	2	3	4	5	OUT	IN	Δ
1		<>	↑	←	↑	2	1	1
2	<>		↑	←	<>	1	1	0
3	←	←		←	←	0	4	-4
4	↑	↑	↑		↑	4	0	4
5	←	<>	↑	←		1	2	-1

Count the number of up arrows (↑) or *Outs*
Count the number of left arrows (←) or *Ins*
Subtract the number of *Ins* from the *Outs* to determine the (Δ) *Deltas*

An affinity marked by a high positive delta—lots of *Outs*—without any *Ins* is called a *Primary Driver*, a significant cause that affects many other affinities but is not affected by others. Any affinity without any *Ins* is always considered a Primary Driver. If an affinity has a number of *Ins* and *Outs*, but has more *Outs*, it is considered a *Secondary Driver*. Conversely, an affinity with a number of *Ins* and *Outs*, but has more *Ins*, it is considered a *Secondary Outcome*. An affinity marked by a high negative number that results from many *Ins* but no *Outs* is a *Primary Outcome*, a significant effect that is caused by many of the affinities, but does not affect others. Affinities with equal numbers of *Ins* and *Outs* indicate a position in the middle of the system, and are called *Circulators* or *Pivots*.

Table 3.06: Sample Tentative Systems Influence Figure (SID)

Tentative SID Assignments	
4	Primary Driver
1	Secondary Driver
2	Pivot
5	Secondary Outcome
3	Primary Outcome

After the IRD was sorted into Drivers, Pivots, and Outcomes, a graphic representation of the relationships between these affinities, or an SID, was created. Drivers were placed in front of Outcomes, with Primary Drivers at the far left and Primary Outcomes at the far right. Arrows were then drawn between the affinities to demarcate the direction of the relationship represented (Figure 3.09). After all of the arrows were drawn, redundant links were eliminated (Figure 3.10). Once this was done, the uncluttered SID presented a clear distinction among the relationships between affinities, providing the researcher with a greater capacity to explain how the phenomenon was perceived by participants.

Figure 3.07: Sample Cluttered SID

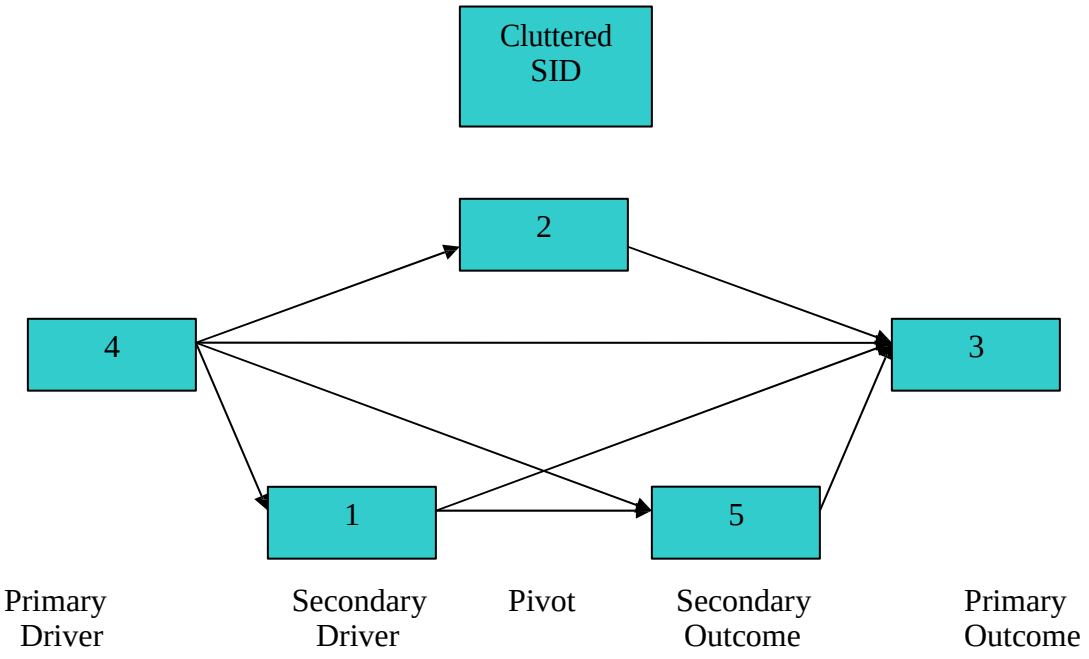
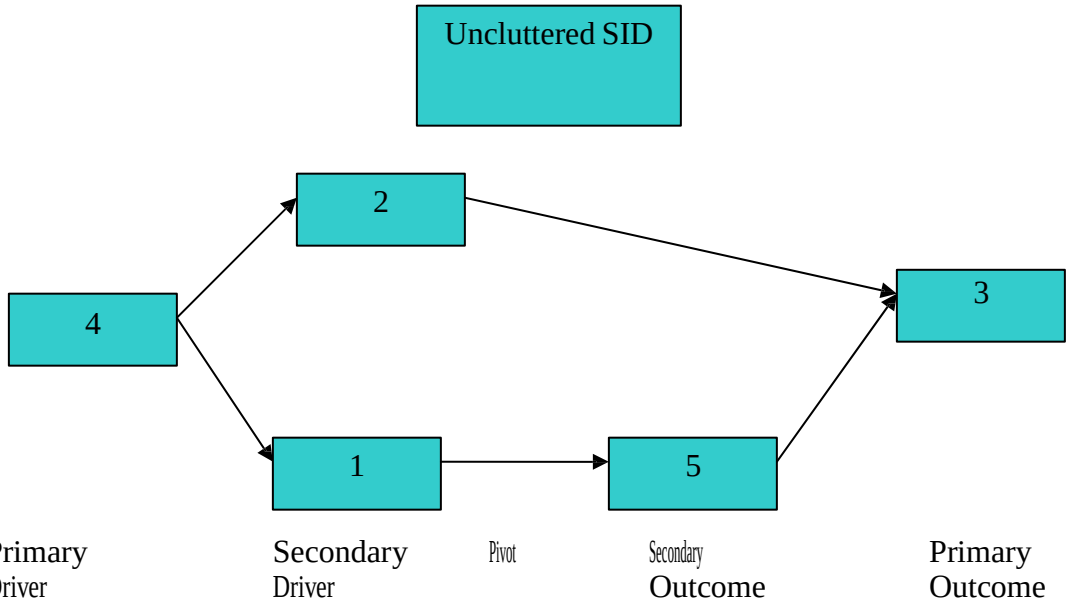


Figure 3.08: Sample Uncluttered SID



Stage 3: IQA Focus Groups with Other Administrators, Faculty, and Staff

With the brainstormed affinities and completed SIDs, the next step of data collection and analysis began. In order to see the extent to which the Core and Data team members' perceptions of a "culture of evidence" had disseminated throughout the college, one focus group was held at each college with administrators and staff and one with faculty not directly involved in the activities of the Achieving the Dream initiative. These focus groups were different from those held in the second stage of the data collection process in that whereas the initial focus groups centered on the participants efforts to define their perceptions of the phenomenon of a "culture of evidence" as related to the definition given in the *Community College Inventory*, the last round of focus groups emphasized the participants' perceptions of the presence of a culture of evidence

at the institution based upon the relationships and affinities described by the Core and Data team members.

Like the first round of focus groups, the second round of focus groups were composed of five steps: describing the process to the participants, warm-up and nominal group process, open coding, axial coding, and theoretical coding leading to the construction of Interrationship Figures (IRDs) and Systems Influence Figures (SIDs). The main difference in the process was a change in the warm-up activity. Focus group participants were still welcomed and then asked to complete the *Community College Inventory* survey. When the surveys had been completed and collected, the facilitator then displayed a composite list of all of the affinities brainstormed in both the Core and Data team focus groups. The facilitator asked the group to silently ponder the following questions: In what ways do these characteristics reflect or not reflect your experiences at the college regarding a "culture of evidence"? What characteristics contribute to or hinder the development of a "culture of evidence"? What other characteristics of the institution's development of a "culture of evidence" are missing? What are examples of any of the characteristics listed? At this point, the process of the focus groups again paralleled the process used in the first round of focus groups, with participants silently capturing their brainstormed responses to the questions on note cards. Open coding then occured, followed by axial and then theoretical coding activities.

The analysis of the collected data from both stages of focus groups was concluded by comparing the Core and Data teams' SIDs with the other administrators, faculty, and student support services professionals' SIDs to ascertain the conceptual implications of the systems. Finally, the responses of the focus group participants to the *Community*

College Inventory survey were compared to the responses collected from the general college community,

METHODOLOGICAL RIGOR

As mentioned earlier, the quality of data can be determined by the extent to which a researcher documents the rigor involved in collecting and analyzing the data. "Rigor"—a researcher's effort to account for the limitations, assumptions, and context within which the data were gathered—is an important characteristic to consider when developing a study (Creswell, 1998). Yore (2003) contends that quality research accounts for the verification and quality of the data and the assumptions that underlay the findings (p. 3). He proposes that qualitative researchers discuss a study's *dependability, credibility, believability, and confirmability,* terms coined by Lincoln and Guba (1985). These terms answer four key questions posed by Lincoln and Guba in establishing a study's soundness:

- How truthful are the particular findings of the study? By what criteria can we judge them? (Credibility)
- How applicable are these findings to another setting or group of people? (Transferability)
- How can we be reasonably sure that the findings would be replicated if the study were conducted with the same participants in the same context? (Dependability)
- How can we be sure that the findings are reflective of the subjects and the inquire itself and rather than the product of the researcher's biases or prejudices? (Confirmability)

The following section will review these terms at they relate to this study.

Credibility

The goal of showing credibility in a study is to "demonstrate that the inquiry was conducted in such a manner as to ensure that the subject was accurately identified and described" (Marshall and Rossman, 1989, p. 145). This study purposely draws upon techniques from IQA in order to accurately reflect the perspectives of the participants involved. In the focus groups, participants were responsible for organizing their own shared experiences, values, and beliefs into affinities, and then they were asked to explain how these affinities related to one another. In order to portray an accurate description of this participant-driven process, the results of the activities during the focus groups were collected.

Transferability

Transferability relates to the extent to which findings from one study can be applied to other similar participants and environments. As Marshall and Rossman (1989) note

> The generalization of a qualitative study to other populations, settings, and treatment arrangements—that is, its *external* validity—is seen by traditional canons as a weakness in the approach. To counter challenges, the researcher can refer back to the original theoretical framework to show how data collection and analysis will be guided by concepts and models. By doing so, the researcher states the theoretical parameters of the research (p. 146).

This study included a sound discussion of IQA and case studies, the methods used to collect data from the two participating colleges. In addition, the researcher used triangulation as a technique to corroborate the data collected in the study. First, focus groups were held at each college with participants directly involved in the Achieving the Dream initiative and with participants not directly connected to the colleges' Achieving the Dream efforts. The affinities formed by participants in these different focus groups were compared and contrasted with one another, and were also compared to the responses

of the college presidents' interviews. Second, the responses of the focus group participants to the *Community College Inventory* survey were compared to each other as well as to responses from the general college community. Finally, findings from one college were compared to findings at the other college, "corroborating evidence from different [cases] to shed light on a theme of perspective" arising in the study (Creswell, 1998, p. 202).

Dependability

The dependability of a study is established through the researcher's "attempts to account for changing conditions in the phenomenon chosen for study as well as changes in the design created by increasingly refined understand of the setting" (Marshall and Rossman, 1989, p. 146). Due to the complex and changing nature of social interaction, qualitative studies do not assume that findings from participants and settings studied by one researcher can always be replicated by another researcher in the future (p. 147). Therefore, a strong study accounts for the thought process of the researcher along the way in a manner others would be able to follow and understand. To make this study's findings dependable, an audit trail will be maintained by the researcher, including the transcripts of the president interviews and copies of the organized index cards created by focus group participants; copies of the steps of the IQA process (ARTs, IRDs, and SIDs); and the disaggregated results from the colleges' responses to the *Community College Inventory* survey. This audit trail allows readers to see the steps of the study's development and the findings upon which the researcher's conclusions are based.

Confirmability

A qualitative research proposal "should respond to concerns that the natural subjectivity of the researcher will shape the research" (Marshall and Rossman, 1985, p. 147). To do this, the researcher must include dissenting or multiple viewpoints expressed

by participants in the study. In the IQA method, multiple viewpoints were accounted for by starting the focus group with a silent brainstorming activity and allowing all participants to change the organization of the brainstormed ideas as they pleased. To further capture variances in thought that arise in the data collection process, a transcript of the president interviews was included in the study. Data collection methods and analyses have also been made explicit so that there is clarity in how the researcher's conclusions came about (Marshall and Rossman, 1985).

LIMITATIONS

Having discussed the verification and quality of the data collected and analyzed in this study, it is important to note existing limitations. First, because of scheduling demands, focus groups were limited to members of the colleges' Core and Data teams who were available and willing to participate, as well as to other college faculty and administrators recommended by the college contact person who were willing to participate in the study. Second, because of the collaborative nature of the focus group coding process, it was possible that the voices of participants who did not vote with the majority were eliminated. To code data accurately, the researcher paid close attention to these issues.

CONCLUSION

This chapter explains the methodology used to study the relationship between perceptions of community college faculty, administrators, and staff directly involved in institutional activities developing a "culture of evidence" at their institution and their non-directly involved counterparts regarding the presence of data-driven planning and decision-making processes at the college. The chapter is organized into five sections: *research questions, research methodology, participants*, *data collection, methodological rigor*, and *limitations*. In the first section, the research questions of the study and their development are presented. The *research methodology* section provides a rationale and

overview of the two methods being employed in this study, namely IQA and case study. Background information on the Studied Community College District (SCCD) and the two participating colleges—College Two and College One—is presented in the *participant* section, and the *data collection* section outlines the extensive step-by-step process of behind the college-wide survey and both stages of IQA focus groups. In the *methodological rigor* section, the quality and verification of the study model is considered as it relates to credibility, transferability, dependability, and confirmability. Finally, the limitations of this study are considered in the *limitations* section.

Chapter 4: Results of the Study

INTRODUCTION

This chapter lays forth the results from this study's collection of data. First, it details the execution of and results from the focus groups and president interviews held at participating colleges. After comparing these results within each institution and between institutions, the researcher then presents results from institution-wide surveys. These institution-wide results are compared to the results from the focus groups—again within each institution and between institutions.

Research Questions

The purpose behind the collection of data in this study was to ascertain as possible insight into the following questions:

- How do faculty, student services professionals, and administrators on the college's Achieving the Dream Core and Data teams perceive the presence of a "culture of evidence" at their institution, as defined by the *Community College Inventory*?
- What is the understanding of the faculty, student services, and administrator team members of a "culture of evidence"? What do they perceive are the characteristics at the institution that either contribute to or inhibit the development of a data-driven culture? How do they perceive the system of relationships that exists between these characteristics?
- How do faculty, student services professionals, and administrators not directly participating in the colleges' Achieving the Dream efforts perceive the presence of a "culture of evidence" at their institution, as defined by the *Community College Inventory*?

- To what extent has the system underlying a "culture of evidence" at the institution, as perceived by the Core and Data team members, permeated the perceptions of faculty and administrators at the college not directly participating in the Achieving the Dream process?

The responses to these questions are reported below. First, focus group and interview results from the two participating colleges, College One and College Two, are presented. Following this section, results from an institution-wide survey administered at each institution is presented.

FOCUS GROUP AND INTERVIEW RESULTS

College One Focus Group and Interview Results

Four focus groups were held at College One from June 1 – June 30, 2006. The sampling methods used for each group is presented below, along with participant demographic information and data collected from each focus group.

College One: Achieving the Dream Core Team Focus Group

Participant Profile. Each of the approximately fifteen members of the college's Achieving the Dream Core Team was invited to participate in the focus group; in all, five members of the core team attended. Three participants were male, two were female; three were administrators, one a faculty member, and one a staff member. Four of the participants were between the ages of 45 – 50, and one participant was older than 55. Three participants had been at the institution for more than ten years, and two had been employed at the college for less than five years. All five participants held post graduate degrees. Four of the participants were white, and one was Hispanic. In reporting their knowledge of statistical analyses, four people stated having had taken at some point

college-level coursework in statistics, while one person reported having only on-the-job exposure to statistical analyses. Two participants said that, on average, they used data to inform day-to-day activities at least once a week, and the other three participants reported that data informed their day-to-day activities at least twice a week.

Table 4.01: Profile of College One Core Team Focus Group Participants

Gender	*Male*	**3**	*Female*	**2**		
Age	*45-55*	**4**	*55+*	**1**		
Length at College	*Less than 5 Years*	**2**	*11 Years to 15 Years*	**1**	*16 Years to 20 Years*	**2**
Current Position	*Faculty*	**1**	*Administrator*	**3**	*Staff*	**1**
Highest Credential	*Post-Graduate Degree*	**5**				
Experience w/Statistical Analysis	*On the Job Training*	**1**	*College-Level Coursework*	**4**		
Use Data to Inform Work	*Once a Week*	**2**	*2-3 Times a Week*	**2**	*4+ Times a Week*	**1**
Race/Ethnicity	*White*	**4**	*Hispanic*	**1**		

Focus Group Flow. The focus group lasted two hours and began with the participants completing the "culture of evidence" section of the *Community College Inventory* and a short profile questionnaire. When the inventory and questionnaire had been completed by all of the participants, the facilitator paired up the participants for five minutes and had them discuss the question, "What key factors have contributed or hindered the development and maintenance of a 'culture of evidence' at this college?" When the five minutes had ended, each participant silently captured what he or she felt were the salient comments made in the discussion, as well as other personal thoughts on the subject, onto note cards, which were then taped to the wall. The note cards were read aloud, and participants were allowed to ask for clarification of any of the responses. After all of the responses had been read, the group was asked to discuss what concepts or components of

the college's "culture of evidence" might be missing from the collection on the wall, and additional responses were added. This process occurred twice. When the group felt comfortable that the note cards on the wall adequately described all of the key factors related to the college's "culture of evidence," the group was asked to organize the cards into categories. The group elected one person to initially separate and clump cards; once this was done, the entire group jostled cards between groups until all cards had been assigned to a group and all of the participants were satisfied with the results. The group then named each of the categories, and each wrote a summary of one of the categories that could be understood by an external entity. Finally, starting with the category furthest to the left, the facilitator led the group in designating which of three relationships they perceived existed between different categories: *the first category drives the second category*, *the second category drives the first category*, or *there is no strong relationship between the first and second categories.*

Categories Developed in Focus Group. After being asked to describe the key factors that contribute or hinder the development and maintenance of a "culture of evidence" at the college, the College One Achieving the Dream Core Team Focus Group participants sorted their responses into five categories: *Leadership, Accreditation, Data, Strategic and Unit Plans*, and *What's Next/Next Steps*. The *Leadership* category included twelve responses that referred to teamwork, key individuals involved in creating data-driven processes, and a discussion of the stability of leadership at the institution. Two of the responses referred directly to the college president, while six of the responses mentioned the involvement of the college's executive team and the institutional research office. The participants described this category as, "It's up to the overall leadership and key persons to fulfill the vision [of a data-driven environment]."

The *Accreditation* category contained six responses. Three of the responses specifically mentioned institutional accreditation, and two responses referred to program review processes. One response linked the accreditation process to the creation of institutional effectiveness at the college.

Twelve cards made up the category called *Data*. The group defined "data" as "the collection of information pertaining to historic operations that can be used to forecast future expectation." Responses in this category included mentions of student and faculty data, the development of a strong institutional research office and the automation of data collection, a list of councils that use the data, national benchmarking, and a recognition people at the college are "still learning what to look at and what to look for." The *Data* section was also the only section that contained a response referencing the Achieving the Dream work at the institution.

The *Strategic and Unit Plans* category was compiled of eight responses. Three of the responses mentioned the college's strategic planning process, while four additional responses discussed unit planning or planning done by support committees. The last response noted the importance of historical tracking in creating a strategic plan. In summarizing planning at the institution, the participants felt that all of the different individuals involved in the college's planning process "get all the needed data to ensure decisions made have validity and fit into our overall mission of serving students and delivering quality education."

The last category, the *What's Next/Next Steps* affinity, included six responses. This category contained the most diverse group of responses, ranging from the need for improved internal and external communication (dissemination of data), the importance of building a data-driven infrastructure over a five-year period in solidifying its effect, the

necessity of maintaining "fun" in the process of being data-driven, increasing student input, to a desire to improve collaboration efforts with other colleges in the district. The group summarized this category as, "Much has been achieved, but more remains to be done. Through trials and errors we have accomplished many things, giving us the courage to expand our reach and fine-tune the things we have already done."

Table 4.02: College One Achieving the Dream Core Team Focus Group Categories (Affinities)

Categories (Affinities)		
Leadership	Accreditation	What's Next/Next Steps
Data	Strategic & Unit Plans	

Perceived Relationships Between Categories. After the categories were created, the participants then decided as a group whether each of the categories strongly influenced another category, whether each group was strongly influenced by another category, or whether no strong relationship existed between categories. The participants perceived strong relationships between all five of the categories that formed a linear pattern. The group saw *Leadership* influencing all of the other categories; *Accreditation* was perceived as influencing *Data, Strategic and Unit Plans,* and *What's Next/Next Steps.* The group also believed that *Data* drove the college's *Strategic and Unit Plans,* and that planning directly impacted the *Next Steps* for the institution. *What's Next/Next Steps* was perceived to be influenced by all of the other categories.

Table 4.03: College One Achieving the Dream Core Team Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
A. Leadership B. Accreditation C. Data D. Strategic & Unit Plans E. What's Next/Next Steps	A → B A ← B A <> B (No Relationship)

Composite Interview
Affinity Relationship Table

Affinity Pair Relationship		**Affinity Pair Relationship**		**Affinity Pair Relationship**		**Affinity Pair Relationship**
A ← B		A ← E		B ← E		E → D
A ← C		B ← C		C → D		
A → D		B → D		C ← E		

Figure 4.01: College One Achieving the Dream Core Team Focus Group Cluttered Affinity Relationships

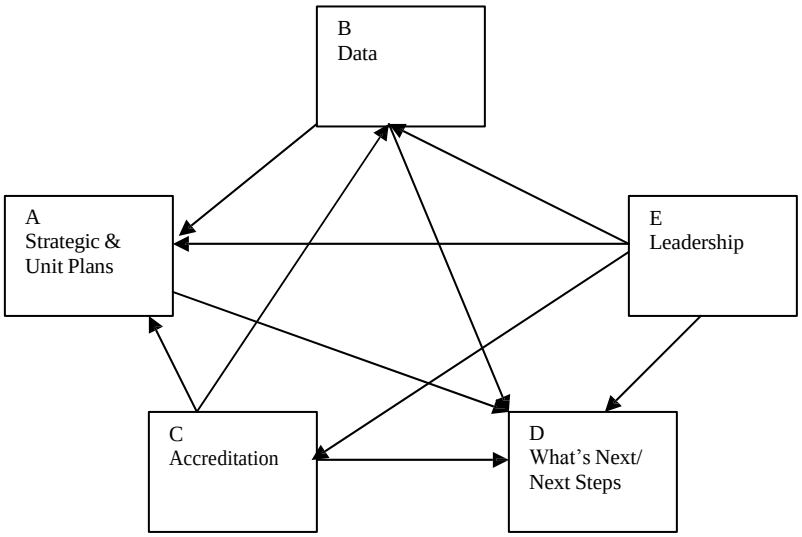
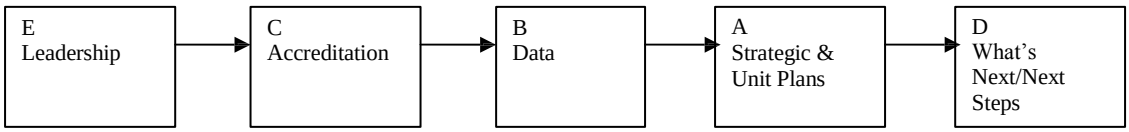


Figure 4.02: College One Achieving the Dream Core Team Focus Group Uncluttered Affinity Relationships



What's Next/Next Steps are driven by the Strategic and Unit Plans, which are driven by Data, which are driven by the Accreditation Process, which is driven by how Leadership approaches accreditation.

College One: Achieving the Dream Data Team Focus Group

Participant Profile. Many of the college employees who served on College One's Achieving the Dream Core Team also served on the Data Team, and Data Team members who had participated in the Core Team Focus Group were not included in the Data Team Focus Group. All of the remaining ten members of the college's Achieving the Dream Data Team were invited to participate in the focus group, and four Data Team members did. Three of the participants were female; one participant was male. Half of the participants were between the ages of 25-44, and the other half of the participants were 45 years old or older. Three of the participants had been employed at the college between 11 to 20 years, and one participant had worked at the institution between 5 to 10 years. Three of the participants were faculty members; the fourth participant reported being both an administrator and staff member. As with the Core Team Focus Group participants, all four people in the group had earned a post-graduate degree. One person—the director of institutional research—held a degree in a field related to analytical statistics, while the two of the three faculty members reported having "little to no experience" with statistical analysis. The remaining faculty member reported having done some college-level work and on-the-job training with the use of statistics. The three faculty members reported using data to inform daily work about 2 to 3 times each semester; the fourth person

reported using data multiple times a day. Finally, three people in the group reported being of Hispanic descent, and one person reported being white.

Table 4.04: Profile of College One Data Team Focus Group Participants

Gender	*Male*	**1**	*Female*	**3**				
Age	*25-44*	**2**	*45-55*	**1**	*55+*	**1**		
Length at College	*5 Years to 10 Years*	**1**	*11 Years to 15 Years*	**2**	*16 Years to 20 Years*	**1**		
Current Position	*Faculty*	**3**	*Administrator*	**1***	*Staff*	**1***		
Highest Credential	*Post-Graduate Degree*	**4**						
Experience w/Statistical Analysis	*Little to No Experience*	**2**	*On the Job Training*	**1***	*College-Level Coursework*	**1***	Degree/ Certificate in Field	**1**
Use Data to Inform Work	*2-3 Times a Semester*	**3**	*Multiple Times a Day*	**1**				
Race/Ethnicity	*White*	**1**	*Hispanic*	**3**				

* One participant reported two of the listed responses.

Focus Group Flow. The Achieving the Dream Data Team focus group also lasted two hours and began with the participants completing the "culture of evidence" section of the *Community College Inventory* and a short profile questionnaire. After the inventory and questionnaire had been completed by all of the participants, participants were paired by the facilitator into groups for five minutes and asked to discuss the question, "What key factors have contributed or hindered the development and maintenance of a 'culture of evidence' at this college?" The pair work was followed by each participant silently capturing what he or she felt were the salient comments made in the discussion, as well as other personal thoughts on the subject, onto note cards, which were then taped to the wall. Afterward, the note cards were read and their meanings clarified. After all of the responses had been read, the group was asked to discuss what concepts or components of the college's "culture of evidence" might be missing from the collection on the wall, and additional responses were added. A very animated and involved discussion occurred, and the facilitator wrote down words and phrases said by the participants. The words and

phrases were then read back to the group, and the group decided if the thought had been appropriately captured, if the card needed revising, or if the card should be discarded and a new card written. The accepted cards resulting from this process were added to those on the wall. When the group felt comfortable that the note cards adequately described all of the key factors related to the college's "culture of evidence," the group organized the cards into categories. Two of the group members moved the displayed cards into groups, while the other two participants shouted out suggestions of where cards should be placed. When all of the cards had been sorted, the group then named each of the categories and collaboratively brainstormed a phrase that described the contents of each category. Finally, participants worked together to identify which whether categories strongly influenced each other or whether no strong relationships existed between affinities.

Categories Developed in Focus Group. The College One Achieving the Dream Data Team focus group participants organized the responses displayed on the wall into seven categories: *Data Analysis, Data Interpretation, Key People, Data Dissemination, Achieving the Dream, Intangibles,* and *Leadership.* For each of these affinities, the group also brainstormed a phrase to describe what the name of the categories meant. The first category, *Data Analysis*, contained five responses, three of which specifically mentioned the need to analyze data. One of the cards noted a need for more data, and the last card mentioned the balance between data quality and quantity. The participants defined "data analysis" as "the actual crunching of the numbers," the first step in using data to inform decisions at the college.

The next category, *Data Interpretation*, or "What do the numbers mean?" was made up of four responses. All four responses referred to gaps in what the institution

perceived it was accomplishing and what it was really accomplishing. Two cards specifically posed the question, "How do we know what we're doing?"

Key People consisted of six responses focused on "the facilitators of the vision—those who do it!" Three of the cards referred to support provided by personnel in the institutional research office, and another card mentioned the role of deans and department chairs in providing leadership within smaller segments across the college. The last two responses gave general allusions to individuals who "take up the challenge" and facilitate the "vision."

The largest group, the affinity *Data Dissemination* contained nine responses. More than half of the responses mentioned the need to disseminate data being used by the college to make decisions to internal and external constituents, such as in the form of the college fact book, research briefs, or data displayed on the Internet. Other responses mentioned the availability of data at the institution versus the need to "get the word out!" Only one card referred to the discussion of data, while the rest focused on the dissemination of information.

The fifth and sixth groups, *Achieving the Dream* and *Intangibles*, both contained three responses. Defined as providing "the framework to make the vision reality," the *Achieving the Dream* group included comments about data-driven decision making, implementing changes that affect outcomes, and how the initiative focuses the college on student success and outcomes at the institution. The responses listed under *Intangibles*, or "the results you can't measure with a number," noted the importance of relationships between students and staff in achieving student success (two of the responses), and the lack of data to support the impact of collegiality.

Finally, the group titled *Leadership,* or "the ability to envision and inspire," was composed of six responses. Similar to the responses in the Core Team's *Leadership* group, the responses of the Data Team specifically mentioned the college president and the executive team as being responsible for the development of a "culture of evidence," citing their efforts in supporting risk-taking, focusing the college's efforts to become data driven, and providing the necessary vision. The team also mentioned the role of shared governance in the process, and questioned the extent to which others at the institution will be willing to "jump on board" and support a culture grounded in the use of data.

Table 4.05: College One Achieving the Dream Data Team Focus Group Categories (Affinities)

Categories (Affinities)		
Data Analysis	Key People	Achieving the Dream
Data Interpretation	Data Dissemination	Intangibles
Leadership		

Perceived Relationships Between Categories. With seven categories, or affinities, designated, the group determined whether each of the categories strongly influenced another category, whether each group was strongly influenced by another category, or whether no strong relationship existed between categories. The participants perceived *Leadership* at the college influencing all of the other categories except *Data Interpretation*, which was seen as influencing the decisions made by the leadership team. The *Achieving the Dream* initiative was seen as influencing the work of *Key People,* who in turn drove *Data Analysis, Data Interpretation,* and *Data Dissemination*. *Intangibles* only had a strong relationship to *Leadership* and *Key People*, as these two groups influenced how *Intangibles* were defined and addressed.

Table 4.06: College One Achieving the Dream Data Team Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
A. Data Analysis B. Data Interpretation C. Key People D. Data Dissemination E. Achieving the Dream F. Intangibles G. Leadership	A → B A ← B A <> B (No Relationship)

Composite Interview
Affinity Relationship Table

Affinity Pair Relationship		**Affinity Pair Relationship**		**Affinity Pair Relationship**		**Affinity Pair Relationship**
A → B		B ← C		C ← E		E x F
A ← C		B → D		C → F		E ← G
A → D		B ← E		C ← G		F ← G
A ← E		B x F		D ← E		
A x F		B → G		D x F		
A ← G		C → D		D ← G		

Figure 4.03: College One Achieving the Dream Core Team Focus Group Cluttered Affinity Relationships

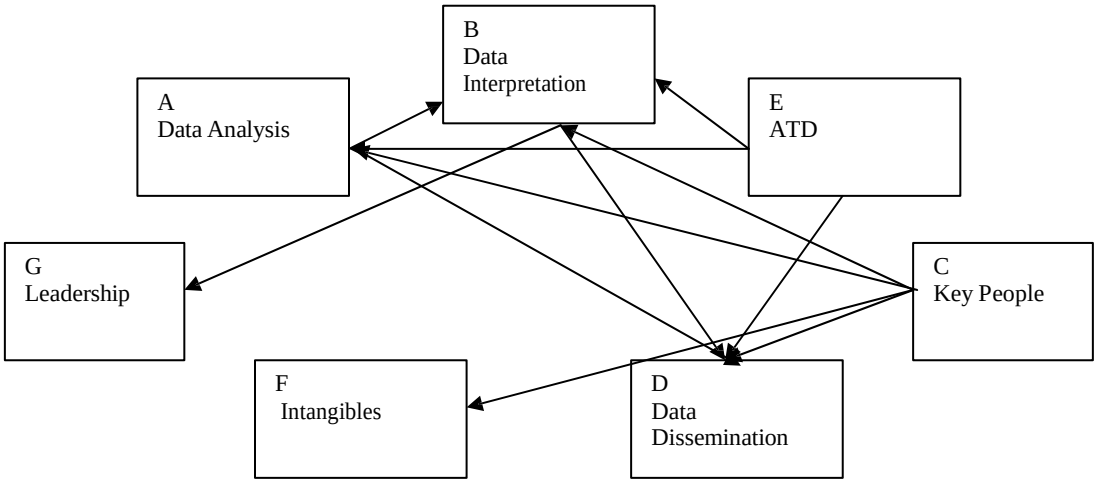
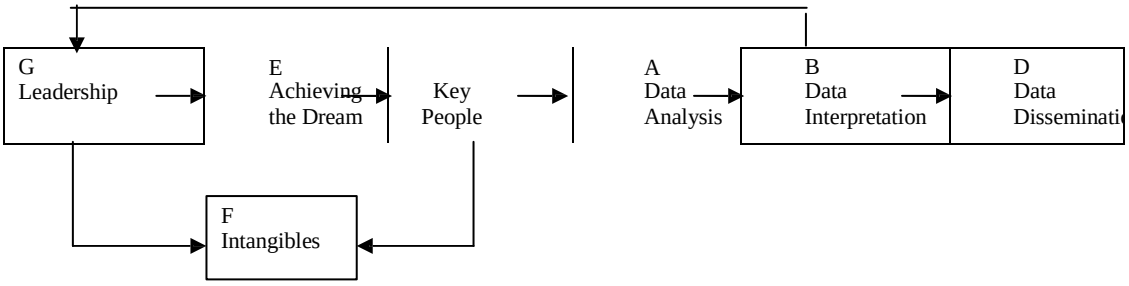


Figure 4.04: College One Achieving the Dream Data Team Focus Group Uncluttered Affinity Relationships



Leadership drives Achieving the Dream, which drives key people, who drive data analysis and thereby data interpretation. Data interpretation leads to how data is disseminated, and also drives the leadership. Only Leadership and Key People have influence on Intangibles.

College One: Staff Focus Group

Participant Profile. All college employees in administrative or staff positions who were not assigned or participating on a committee, taskforce, or team connected to the Achieving the Dream initiative received an email invitation to attend the college staff focus group. Of this sample, seven persons participated in the focus group—six staff members, and one administrator. All seven participants were female; three were between the ages of 25 to 44, one was between the ages of 45 to 55, and three were 56 years old or older. Four participants had been employed at the college for less than ten years, two had been employed for more than ten years but less than 15 years, and one person had been at the college for more than 20 years. Five of the women had completed a bachelor's or graduate degree, while the other two women had only obtained either an associate's degree or a high school diploma. All of the participants indicated they used data in their daily work between once and three times a semester, and six of the women said they had gained experience with statistical analysis through on-the-job training; two women also noted having had some college-level work using statistics. Finally, six of the women were Hispanic, and one identified herself as being white.

Table 4.07: Profile of College One Staff Focus Group Participants

Gender	*Male*	**0**	*Female*	**7**				
Age	*25-44*	**3**	*45-55*	**1**	*55+*	**3**		
Length at College	*Less than 5 Years*	**2**	*5 Years to 10 Years*	**2**	*11 Years to 15 Years*	**2**	*More than 20 Years*	**1**
Current Position	*Faculty*	**0**	*Administrator*	**1**	*Staff*	**6**		
Highest Credential	*High School Diploma*	**1**	*Associates Degree*	**1**	*Bachelor's Degree*	**2**	*Post-Grad Degree*	**3**
Experience w/Statistical Analysis	*On the Job Training*	**6***	*College-Level Coursework*	**2***				
Use Data to Inform Work	*1 Time a Semester*	**2**	*2-3 Times a Semester*	**5**				
Race/Ethnicity	*White*	**1**	*Hispanic*	**6**				

* One or more participants reported two of the listed responses.

Focus Group Flow. The staff focus group lasted two-and-one-half hours, beginning with the completion of the short profile questionnaire and "culture of evidence" section of the *Community College Inventory*. As in previous focus groups, participants were paired by the facilitator into groups of three for five minutes and asked to discuss the question, "What key factors have contributed or hindered the development and maintenance of a 'culture of evidence' at this college?" Different from the first two focus groups, however, was that the participants in this focus group were given a list of the affinities identified by the first two groups to use as a discussion starter. The affinities from both of the previous focus groups were listed, and the staff members were only told that the list contained concepts identified by others in the past and might be useful in helping them frame their perceptions. A period of silent brainstorming using note cards then occurred, after which the note cards were displayed on the wall and reviewed for clarification. The participants were then asked to sort the cards into categories, and the group elected one woman to move the cards while the rest directed her from their seats. There was some disagreement on in which group some of the note cards belonged, and an animated discussion ensued between the women, during which the facilitator captured

key words and phrases being used by the participants. These note cards were read to the group for accuracy, and one woman in the group acted as scribe to capture additional words and phrases the group felt were important to note. When the group felt comfortable that the note cards depicted all of the key concepts in the development of a "culture of evidence" at the institution, the group then assigned titles to each category and identified strong relationships they felt existed between categories.

Categories Developed in Focus Group. Six categories emerged from the note card responses created by the staff participants: *Communication Process, Data, Data Sharing, Institutional Practices, Initiatives,* and *Leadership*. Of the 48 brainstormed note cards, ten cards were grouped under the title, *Communication Process.* The majority of the cards focused on breakdowns in the communication process at the college, with three cards noting different levels of data communication between different college constituency groups, some being in "the loop" and "some not." An additional three cards mentioned the role of individuals in seeking out data ("do individuals know how to go to the data?"). Two cards mentioned the importance of sharing information and results, and the last card noted the presence to some extent of "miscommunication" at the institution.

The *Data* category consisted of ten cards, as well. Four responses listed examples of reports, documents, or email communications through which data are made available at the college. Another four responses noted the "incomplete" availability of data across campus. The last two responses made general reference to the importance of communicating data.

Like the *Communication Process* and *Data* categories, the *Data Sharing* group was composed of responses that highlighted the importance of sharing data between departments and constituent groups and general breakdowns in communication at the

institution. Multiple cards also emphasized "all individuals [are] responsible to go to the data to access." Responses in this category mentioned the "interconnectedness" of people at the college and a feeling that many data were "piecemealed" out to individuals and departments. Two note cards noted communication with external audiences.

The *Institutional Practices* section was comprised of only four responses. Three of the responses referred to strategic and unit plans. The fourth response referred to the influence the accreditation process had on data usage at the institution. On the other hand, the *Initiatives* group consisted of twelve note card responses. Three of these responses captured the participants' unfamiliarity with the *Achieving the Dream* initiative ("Achieving the Dream—what is the purpose? What is it?"). However, six other responses listed components of the college's Achieving the Dream efforts, including a focus on gatekeeper and developmental courses, self-improvement, and its connection to the district. The responses also included two other initiatives in which the college had participated: the literacy pipeline and South Texas' Education Levels.

The last category, *Leadership*, contained three responses. One card mentioned leadership in general, while the other two cards stated a focus on identifying and connecting with "key people."

Table 4.08: College One Staff Focus Group Categories (Affinities)

Categories (Affinities)		
Communication Process	Data	Data Sharing
Institutional Practices	Initiatives	Leadership

Perceived Relationships Between Categories. The participants in the staff focus group perceived that *Leadership* drives all of the college's efforts to create a data-driven environment. *Institutional Practices* directly influences how *Data* are used, which in turn drives the *Initiatives, Data Sharing,* and the *Communication Process.* However, a circle is formed in that the *Communication Process* informs the *Data,* which in turn informs *Initiatives, Data Sharing,* and again the *Communication Process*. While *Leadership* also drives *Initiatives,* there is no strong relationship between *Initiatives* and *Institutional Practices*.

Table 4.09: College One Staff Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
A. Communication Process B. Data C. Data Sharing D. Institutional Practices E. Initiatives F. Leadership	A → B A ← B A <> B (No Relationship)

Composite Interview
Affinity Relationship Table

Affinity Pair Relationship		**Affinity Pair Relationship**		**Affinity Pair Relationship**		**Affinity Pair Relationship**
A → B		A ← F		B ← F		D x E
A ← C		B → C		C ← D		D ← F
A ← D		B ← D		C ← E		E ← F
A ← E		B → E		C ← F		

Figure 4.05: College One Staff Focus Group Cluttered Affinity Relationships

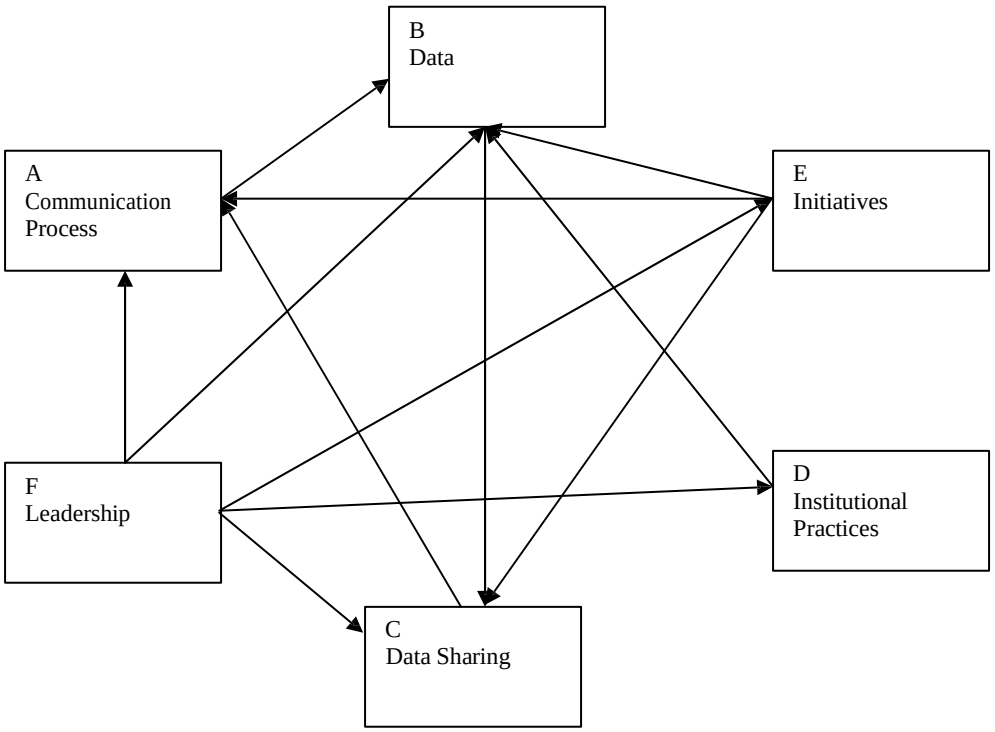
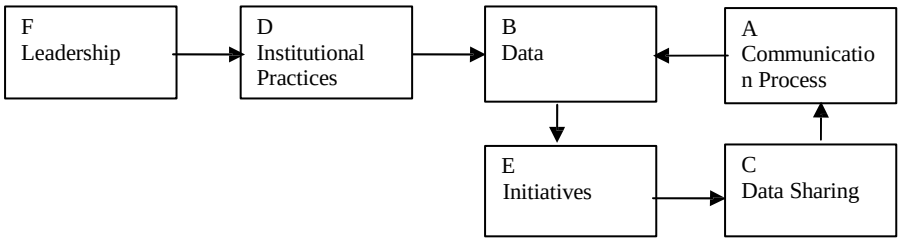


Figure 4.06: College One Staff Focus Group Uncluttered Affinity Relationships



Leadership drives institutional practices, which drive data, initiatives, data sharing, and the communication process. However, a circle is formed in that the communication process informs the data, which in turn inform initiatives, data sharing, and again the communication process. While leadership also drives initiatives, there is no strong relationship between initiatives and institutional practices.

College One: Faculty Focus Group

Participant Profile. As with the sampling for the staff focus group, all of the faculty members at the institution not appointed or participating on the college's internal Achieving the Dream committees were extended an electronic invitation to participate in the faculty focus group. Only one faculty member arrived at the appointed time, and the focus group session was rescheduled. This time, another email invitation was sent out, and each of the department chairs was contacted to encourage faculty participation. At the second scheduled session, again only one faculty member attended. After consulting with the dean of arts and sciences, each of the departments was contacted and asked to send over any faculty presently not in class. This resulted in the involvement of six faculty members, two male and four female. All faculty members were full-time, and all of them were 45-years-old or older. One participant had been employed by the college for less than five years, while the rest of the participants had been at the institution from 11 to 20 years. All of the participants held graduate degree. Three of the faculty members remarked that they had gained experience with statistical analysis through on-the-job training, two mentioned having had professional development activities related to statistics, and two had completed related college-level work. One participant indicated using data to inform daily tasks once a semester, another two reported using data two to three times a semester, and two participants reported using data in their daily functions one to three times each week. In addition, two of the participants identified themselves as white, two identified themselves as Hispanic, and two participants identified themselves as being of an ethnic or racial group other than those categories listed.

Table 4.10: Profile of College One Faculty Focus Group Participants

Gender	*Male*	**2**	*Female*	**4**				
Age	*45-55*	**2**	*55+*	**4**				
Length at College	*Less than 5 Years*	**1**	*11 Years to 15 Years*	**2**	*16 Years to 20 Years*	**3**		
Current Position	*Faculty*	**6**	*Administrator*	**0**	*Staff*	**0**		
Highest Credential	*Post-Grad Degree*	**6**						
Experience w/Statistical Analysis	*On the Job Training*	**6***	*Professional Development Activities*	**2***	*College-Level Coursework*	**2***		
Use Data to Inform Work	*1 Time a Semester*	**1**	*2-3 Times a Semester*	**3**	*1 Time a Week*	**1**	*2-3 Times a Week*	**1**
Race/Ethnicity	*White*	**2**	*Hispanic*	**2**	*Other*	**2**		

* One or more participants reported two of the listed responses.

Focus Group Flow. Because of the spontaneous nature of the participation of the six faculty members in the faculty focus group, the focus group session was shortened to an hour in length. As with the other focus groups, the participants first filled out the questionnaire and inventory form and then were given a few minutes to discuss in groups of three their perceptions of the development of the "culture of evidence" at the college. Similar to the staff focus group, the participants were given the list of affinities from the first two focus groups as a general resource in brainstorming the key elements involved in the college's data-driven culture. After a silent brainstorming activity using note cards, responses were taped to the wall and the group was invited to discuss what the cards meant and what was missing from the displayed responses. During this discussion, the facilitator again captured words and phrases used by the group and then repeated the words and phrases back to the group for verification of accuracy. The cards that the group deemed accurate were added to those listed on the wall, and the group then sorted the cards into categories. Three of the faculty members moved cards around while the other three waited patiently. Once this was done, the group was asked to name each category.

Finally, the participants collectively listed all of the strong relationships they perceived existed between the affinity groupings.

Categories Developed in Focus Group. The faculty focus group participants identified five categories amongst the responses posted on the wall: *Quantitative Data Collection, Gaps in Data, Inadequate Interpretation of Data, Lack of Student Input into Data Collection and Design,* and *Pluses/Minuses with Whole Data Collection*.

Composed of nine responses, *Quantitative Data Collection* contained responses relating to the college's success in gathering and disseminating its results from quantifiable measures. While three responses mentioned in general the college's ability to collect data, three responses specifically noted the involvement of key people and departments in the cycle of data collection. Two additional responses listed *CCSSE* data as an example of data collection and the college's Fact Book as an example of data dissemination. The last response in the group stated the importance "fun" has in student retention.

The second category, *Gaps in Data,* contained not only four responses mentioning gaps in data collected by the institution but also multiple responses listing examples of where data gaps exist. These gaps included data on drops and withdrawals, data on online courses, and data on student preparedness and reasoning. The third category, *Inadequate Interpretation of Data,* was composed of seven responses. The responses noted that having data for the accreditation process was important, but that the data were interpreted after they was collected and reported. Two cards specifically mentioned the lack of the use of data in correlating the relationship between lab periods and other class coursework. In addition, two cards stated that faculty were not involved in the overall discussion or interpretation of data findings.

In the *Lack of Student Input into Data Collection Design* category, nine responses were grouped together. Five note cards displayed the belief that data on student behavior and involvement was lacking at the institution. Three responses referred to student expectations on and off campus, and the final response noted students weren't involved in the data interpretation process.

The final category, *Pluses/Minuses with Whole Data Collection*, was by far the largest grouping with sixteen responses. While some responses praised the ability of the college to compare faculty and department performance against their counterparts across the institution, many responses criticized the "one-size-fits-all" approach to data collection and argued individuals and departments are too unique to be compared. Three responses emphasized a need for discussion of data amongst faculty members, and two responses noted the perceptions of adjunct faculty were largely unknown. Other responses ranged from arguing that many of the issues surrounding student success are out of the college's control, to the perception that spring semester is tougher than the fall semester and thereby skews data, and finally a warning that students and faculty should not be overloaded in a never ending collection of data of students' experiences and success.

Table 4.11: College One Faculty Focus Group Categories (Affinities)

Categories (Affinities)		
Quantitative Data Collection	Gaps in Data	Inadequate Interpretation of Data
Lack of Student Input into Data Collection Design	Pluses/Minuses with Whole Data Collection	

Perceived Relationships Between Categories. The participants in the faculty focus group saw *Quantitative Data Collection* as the main driver of all of the categories, with how quantitative data are collected at the institution directly impacting the *Lack of Student Input in Data Collection Design* and in turn driving the *Inadequate Interpretation of Data.* The *Inadequate Interpretation of Data* influenced where *Gaps in Data* existed as well as the general *Pluses/Minuses with Whole Data Collection* process. However, the *Gaps in Data* were not perceived to be strongly related to the overall advantages and disadvantages of the data collection process.

Table 4.12: College One Faculty Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
A. Quantitative Data Collection B. Gaps in Data C. Inadequate Interpretation of Data D. Lack of Student Input in Data Collection Design E. Pluses/Minuses with Whole Data Collection	A → B A ← B A <> B (No Relationship)

Composite Interview Affinity Relationship Table

Affinity Pair Relationship		**Affinity Pair Relationship**		**Affinity Pair Relationship**		**Affinity Pair Relationship**
A → B		A → E		B x E		D ← E
A → C		B ← C		C ← D		
A → D		B ← D		C → E		

Figure 4.07: College One Faculty Focus Group Cluttered Affinity Relationships

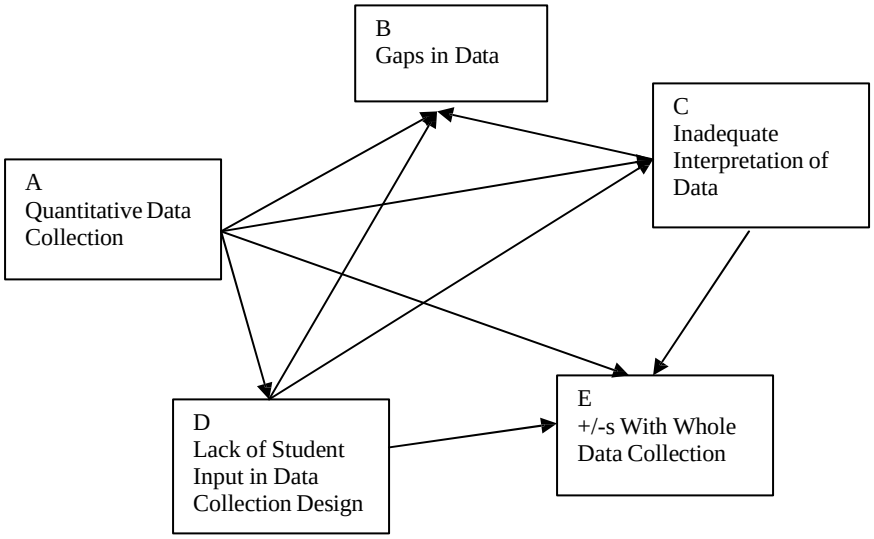
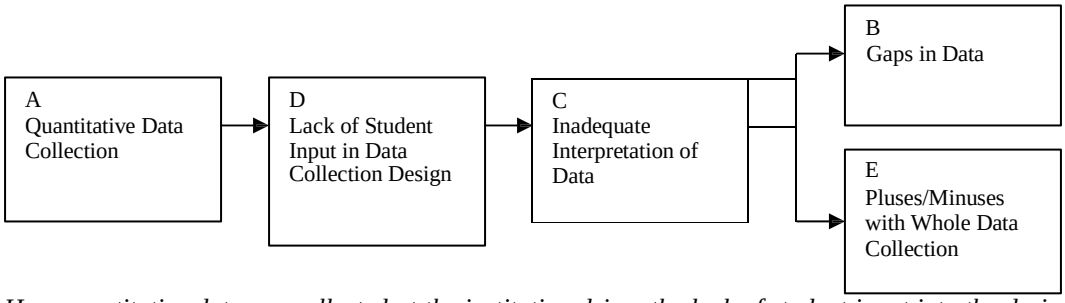


Figure 4.08: College One Faculty Focus Group Uncluttered Affinity Relationships



How quantitative data are collected at the institution drives the lack of student input into the design of data collection, which drives the inadequate interpretation of data. The inadequate interpretation of data influences where gaps in the data exist as well as the general pluses and minuses of the whole data collection process. However, the gaps in the data are not strongly related to the overall advantages and disadvantages of the data collection process.

College One: All Focus Group Comparison

The affinities developed in each focus group at College One were organized into cluttered Affinity Relationship Figures (ARDs) which visually depicted the perceived relationships each focus group felt existed amongst their brainstormed affinity groups. The cluttered ARDs contained a relational line that represented each individual relationship. Through eliminating duplicated relationships between categories, uncluttered ARDs were formed.

The researcher then compared affinities that arose in different focus groups and organized similar responses into themes. Affinity groups were color-coded. When similar affinity groups had been recognized, perceived relationships associated with these affinity groups were studied. Through this process, seven themes emerged from the data:

Initiatives/Achieving the Dream. The role of initiatives in creating a "culture of evidence" arose in two of the focus groups. While the staff group lumped Achieving the Dream in with other initiatives at the college, the Achieving the Dream Data Team group specifically mentioned Achieving the Dream as a "framework" to support the college's existing efforts to create data-driven processes. The Achieving the Dream Core Team group also noted Achieving the Dream was a part of the data the college uses but didn't see it as a larger category. Comments captured in the staff group indicated a lack of understanding about Achieving the Dream.

Communication/Data Dissemination. The communication and dissemination of data was discussed in all four focus groups. While there was variance amongst groups in the perceptions of the effectiveness of current data communication efforts at the college, all groups were in agreement as to the importance of improving and increasing communication across the institution. Interestingly, all of the groups felt involved in the collection of data, and multiple groups noted that the availability of data for an individual often depended upon the level at which the person fell in the administrative structure.

Data Interpretation. Data interpretation emerged as a theme in two of the focus groups: the Achieving the Dream Data Team group, and the faculty group. Both groups saw data interpretation as being a critical component of a data-driven culture. The two groups also recognized that the interpretation of data at the college, when done, is

primarily carried out by the IR department with little to no involvement by other college departments or individuals, including faculty.

Leadership. The theme of leadership as a primary driver emerged in three of the four focus groups, often in reference to the importance of providing "vision" and "keeping people [involved in the process] on track." The importance of leaders setting an example of using data was also noted multiple times. While "leadership" was defined in some of the focus groups as the college president, the importance of "key people"—such as those in the Institutional Effectiveness division—were also mentioned.

Data. Although data were discussed in all four of the focus groups, only two of these groups chose to make "data" one of their main themes. The Achieving the Dream Core Team group described the role of data by listing reasons for why using data is important at the college and types of data collected. The staff group listed the different forms in which data are made available.

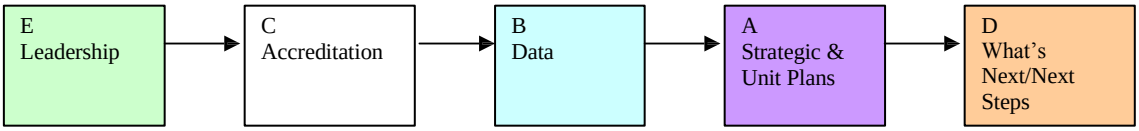
Student Perceptions. The importance of gaining the perceptions of students beyond the data collection stage appeared as a theme in two of the focus groups. Both groups noted there were limitations to what quantitative data can explain about the experiences of students, and some level of qualitative follow-up was necessary. One group also felt that it would be valuable to have student input into what future data should be collected and how best to collect it.

Institutional Planning. Two groups mentioned the role of institutional planning in the development of a "culture of evidence." Interestingly, the Achieving the Dream Core Team group—composed primarily of top-level administrators—saw data collected at the college as influencing the planning process, whereas the staff group saw the planning

process as directing what data would be collected. Both groups described the planning process as the underlying structure of the college's data-driven efforts.

Figure 4.09: College One Focus Groups Affinity Relationship Figures (ARDs) Comparison

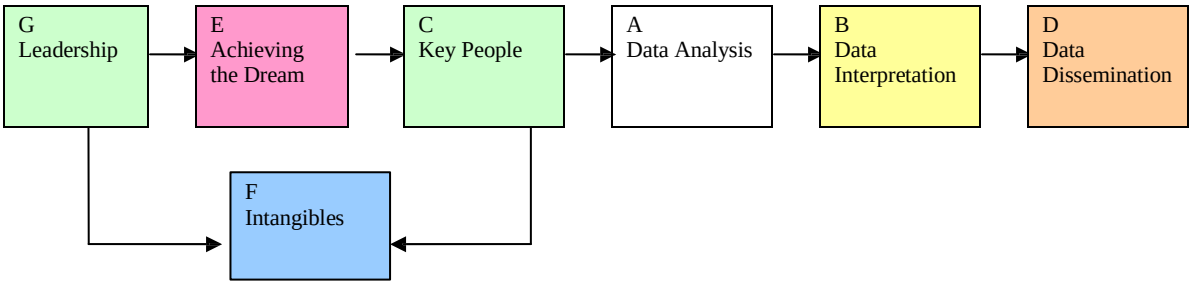
COLLEGE ONE CORE



SUMMARY OF RELATIONSHIPS:

What's Next/Next Steps are driven by the Strategic and Unit Plans, which are driven by Data, which are driven by the Accreditation Process, which is driven by how Leadership approaches accreditation.

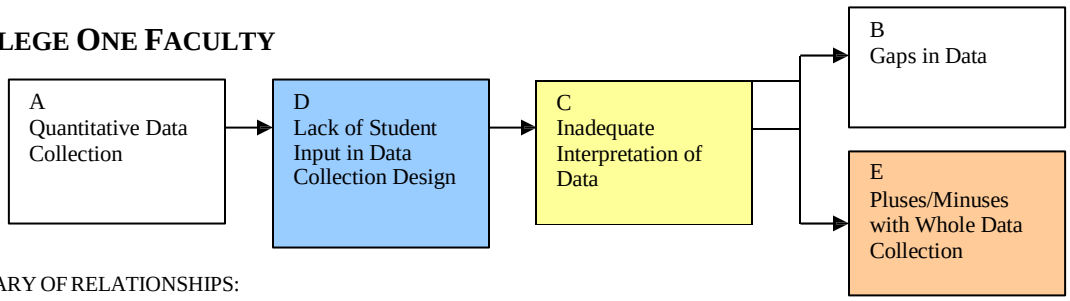
COLLEGE ONE DATA



SUMMARY OF RELATIONSHIPS:

Leadership drives AtD, which drives key people, who drive data analysis and thereby data interpretation. Data interpretation leads to how data is disseminated, and also drives the leadership. Only Leadership and Key People have influence on Intangibles.

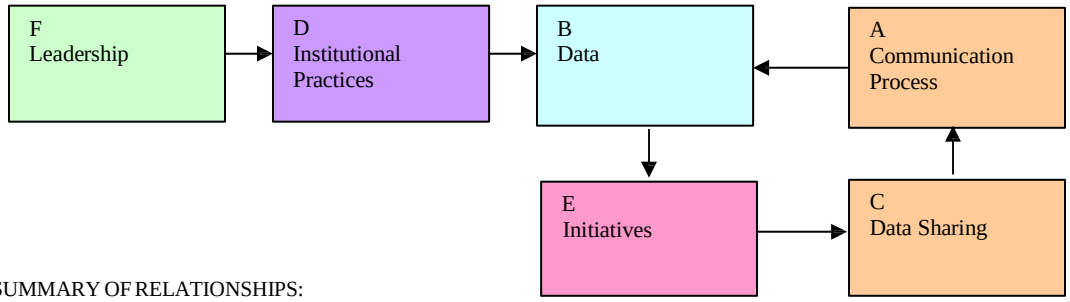
COLLEGE ONE FACULTY



SUMMARY OF RELATIONSHIPS:

How quantitative data is collected at the institution drives the lack of student input into the design of data collection, which drives the inadequate interpretation of data. The inadequate interpretation of data influences where gaps in the data exist as well as the general pluses and minuses of the whole data collection process. However, the gaps in the data are not strongly related to the overall advantages and disadvantages of the data collection process.

COLLEGE ONE STAFF



SUMMARY OF RELATIONSHIPS:

Leadership drives institutional practices, which drive data, initiatives, data sharing, and the communication process. However, a circle is formed in that the communication process informs the data, which in turn informs initiatives, data sharing, and again the communication process. While leadership also drives initiatives, there is no strong relationship between initiatives and institutional practices.

Initiatives/Achieving the Dream

Communication/Dissemination

Data Interpretation

Leadership

Data

Student Perceptions

Institutional Planning

College One: President Interview

In addition to the focus groups held at each college, an hour interview was conducted with the college president. The interview consisted of eight open-ended questions regarding the president's understanding of the development of a "culture of evidence" at her institution. The format of the interview was flexible: the college president was encouraged to elaborate on her perceptions, and questions from the initial

list addressed in the interviewee's comments were not asked. The interviewee was also asked to provide any information she felt was pertinent to the topic but not specifically mentioned in her comments.

An audio recording of the interview was made, and the interview was then transcribed (see appendix). The researcher then scanned the transcription and marked ideas and phrases that occurred multiple times. These marked sections were then organized into affinity groups, and each group was given a name. Further, the affinity groups were bundled into themes. Six themes emerged from the president's interview: *Communication, Trust Between Administration and Faculty/Staff, Processes, a Move Towards Innovation, the Influence of the President,* and the *Influence of Faculty*.

Table 4.13: College One President Interview Themes and Sub-Affinity Groups

Communication	
	General Knowledge Base Across the College
	Communication Structures
	Discussion of Meaning of Data
Trust Between Administration & Faculty/Staff	
	Importance of Ability to Question
	Building Trust in Data Slowly
	Creating Safe, Equal Environment
Processes	
	Budget Process
	Decision-Making Process
Move Towards Innovation	
	Data as Under Girding for Innovation
Influence of President	
	Personally Studying Data
	Presenting Data to Faculty and Staff
Influence of Faculty	
	"Good People"
	Disadvantages of Faculty Longevity

Communication. The first theme emergent in the president's interview focused on *Communication*. This theme consisted of three sub-affinity groups: the general

knowledge base across the college, communication structures, and the discussion of the meaning of data. When the president first arrived at the college, she perceived a lack of general knowledge held by the college's employee groups. As she explained, "People here didn't know why decisions were made, or how decisions were made…everything that I would hear about was hearsay" (Lines 10-13). Multiple examples were given of types of information college employees didn't seem to have, such as the percentage of traditional students versus the number of older, non-traditional students.

The interviewee emphasized the importance of communication structures at the institution in creating a knowledge base across campus. The idea of a "network of communication" was mentioned, which took the form at the college of "the councils that govern this college" (Line 71). These councils included an executive council, a marketing council, an academic council, and a research council. The president also mentioned her use of college-wide meetings to share information on student outcome data. These councils and presentations were presented as an effective means to share data throughout the college.

Finally, the discussion of the meaning of data emerged as an important concept in the college's data communication efforts. The president acknowledged the need for "a level of participation of the data, how it's generated, how it's utilized, and who has it" (Lines 204-205). In order to broaden participation, the president had conversations with administrators and department chairs as to "what makes a data set, and how do you utilize that data set, and what decisions can be made, and what decisions can't be made given that data set" (Lines 189-192). Once these discussions occurred, the conversations were initiated with the Faculty Senate. The theme of these discussions appeared to be, "what do you do with this data? What kind of decision would you make with this data?"

Trust Between Administration and Faculty/Staff. The second theme that developed in the president's interview was that of trust between the administration—specifically the president and executive council—and faculty and staff across the college. Three sub-affinity groups were included in this theme: the importance of the ability to question, building trust in data slowly, and creating a safe, equal environment.

The interviewee emphasized the importance of creating an environment in which constituents could question the assumptions and decisions of their leaders. This open discussion of data "has created a trust that I'm not making decisions just like from a hat" (Lines 99-100). However, to develop this trust, the interviewee noted a need to build trust in data slowly. "Building trust in data slowly" meant starting with familiar data, such as demographic information, and incrementally moving towards "highly volatile data," such as student success rates in individual courses (Line 170). Starting with demographic data enabled the college to not "come to conclusions too quickly," allowing college constituents time to trust the use of data and buy-in to its use (Lines 206-207).

Another component of building trust mentioned by the interviewee was that of creating a safe, equal environment. First, this implied the use of data be applied to all college constituents in the same way. As the president explained, "as a president, once the rules are established then you can't go beyond the rules, and neither can your top-level staff" (Lines 119-121). This idea was also expressed as the elimination of "protected classes" (line 217). Second, a shared perception must be maintained that "the data have integrity and that the data will be utilized for goodwill and not for punishment" (Lines 198-200). The interviewee further defined such an environment as one in which "people can analyze data without blaming taking place" (Lines 219-220).

Processes. *Processes* was the third main theme in the president's interview. These processes were broken down into two sub-groups: budget processes and decision-making processes. Mentions of the budget process noted the movement of set priorities from the unit level to the executive council in informing how funds would be tied to data outcomes. The interviewee vaguely mentioned decision-making processes, which she felt needed to be taught to constituents over time.

Move Towards Innovation. The fourth theme, a *Move Towards Innovation at the College*, encompassed one sub-affinity group. Data were seen as the under girding of future innovative practices at the college. Interestingly, the interviewee saw a "culture of evidence" as keeping "you kind of mired in the data, kind of with your head down in that decision-making [process]" (Lines 209-213). Creating a data-driven culture was thus perceived not as an end goal of improving student success but rather as a means towards that end.

The Influence of the President. The *Influence of the President* emerged as an key theme in the interviewee's comments on developing a data-driven culture at the institution. Two actions made by the president that were seen as creating a "culture of evidence" were specifically mentioned: the president's efforts to study data on the college, and the presenting of data to faculty and staff at the college. The interviewee spoke of the time she had taken when first arriving at the college to collect and study data on student demographics and performance outcomes. As she conjectured, "*I* had to. If I didn't do my own learning, there was no one there [to do it for me]" (Lines 38-39). This set an example for others on campus to access and analyze data. When the interviewee had gathered an understanding of the data, she then perceived her role as the disseminator of that data, which she did through presentations to faculty and staff. This was seen as

being critical to the adoption of data-driven processes: as she noted, "I think that presenting the faculty and staff with the data…kind of allowed me to make decisions that other people had not been allowed to do" (Lines 47-50).

Influence of Faculty. The final theme that emerged in the interview was of the impact faculty have on creating a data-driven culture. The interviewee mentioned multiple times the inherent "goodness" of faculty at the institution and their intent to serve students well. As she asserted, "I think [the faculty] really believes that they're here to make our kids successful" (Lines 150-152). However, the president noted that she saw a disadvantage in faculty longevity. She made it clear that resistance to the use of data was connected to a lack of interest in measuring success on the part of tenured faculty. This was best expressed in the following sentiments:

> I think people having stayed here too long. You know, faculty and chairs having been in the same position for 18 years, let's just say, so that there's nothing new. When people stay in jobs too long, unless they're unusual, they begin to run on automatic. And you don't run on automatic and have a culture of evidence (Lines 158-162).

College One: Comparison of President Interview Themes to Focus Group Affinities

In comparing the themes that emerged in the president's interview and the affinities that were developed in the four focus groups at the college, three themes overlapped with affinity groups. First, both the focus group participants and the president emphasized the importance of communication. Discussion in the focus groups and the president interview referred to the communication structure—that of councils—and their perceived effectiveness. In all of these instances, administrators were more likely to report that the council structure was effective in communicating about data to the entire college, while administrative staff were more likely to respond negatively in regard to the

council system's effectiveness. All groups, including the president, also felt a part of data collection efforts at the institution.

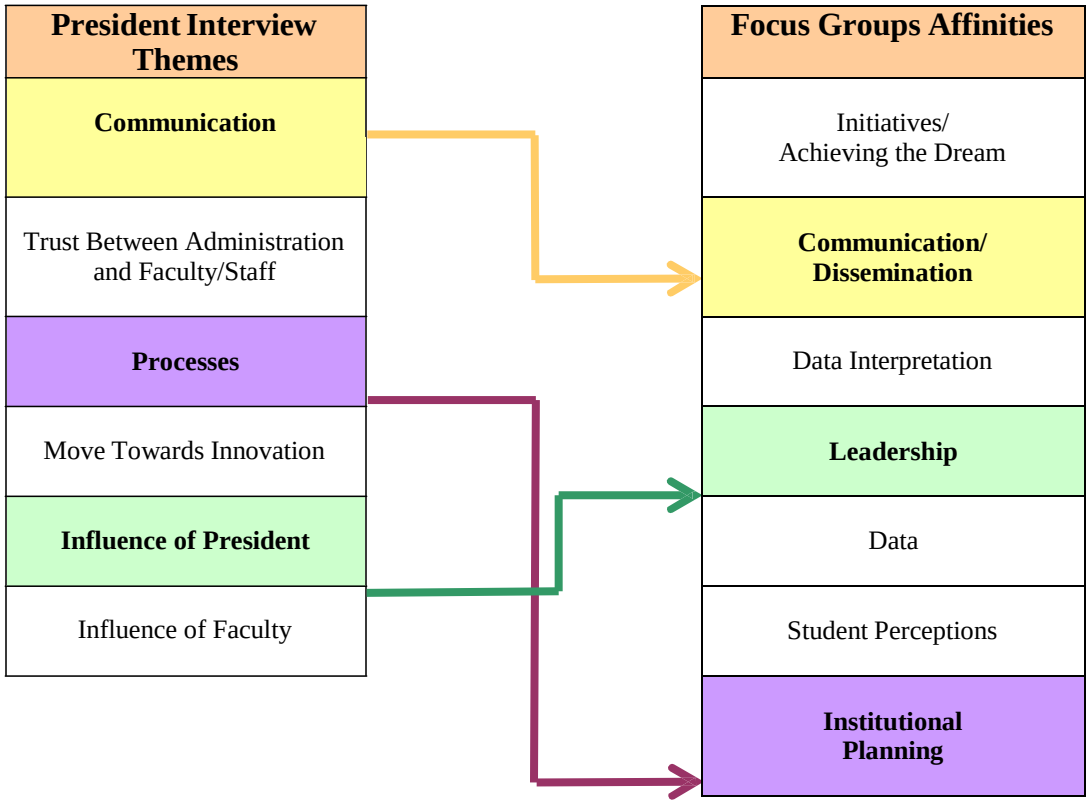
Second, both responses from the focus groups and the president's interview mentioned the importance of institutional processes in developing a "culture of evidence." While the focus groups described institutional processes as generally acting as the underpinnings driving a data-driven culture, the president specifically mentioned the budgeting and decision-making processes as key to the college's efforts. The president agreed with the Achieving the Dream Core Team group in their perception that data collection influenced decision making as opposed to the staff group's perception that decision-making influenced what data were collected.

Third, the president and the focus group participants noted the role of leadership in the development of a "culture of evidence" at the college. Leadership was consistently seen as a primary driver of data usage at the institution. The president also described herself, and was described by others, as a "data person," or someone who frequently uses data to inform daily responsibilities. While the focus group participants mentioned the leadership characteristics of other people at the institution in addition to the president, though, the president only mentioned her role as being key.

It is interesting to note some of the affinities that were not shared between the results from the president's interview and the focus groups. First, the president's comments did not focus on the role of initiatives, such as *Achieving the Dream*, in creating a data-driven culture at the institution. Instead, the president perceived cultural changes as being tied to the efforts of internal leadership, such as the example of the president and the development of institutional processes and councils. Second, while

student perceptions arose as a theme in the focus groups, faculty perceptions were of concern to the president.

Figure 4.10: Shared Themes in College One President Interview and Focus Group Results



College Two Focus Group and Interview Results

Four focus groups were also held at College Two from June 1 – June 30, 2006. As with the focus groups from College One, the sampling methods used for each group is presented below, along with participant demographic information and data collected from each focus group.

College Two: Achieving the Dream Core Team Focus Group

Participant Profile. When the administration at College Two was first contacted regarding holding focus groups with members of the college's Achieving the Dream Core and Data Teams, they explained that their Core and Data Teams had been combined into one team, and a focus group that included both Core and Data team members would be more representative of the college's efforts than two separate focus groups. One focus group was scheduled and all college employees participating on any of the Achieving the Dream committees or taskforces received an electronic email invitation to attend. At this focus group, however, no one from the Institutional Research Office nor any members of the executive administrative team were in attendance. Thus, a second focus group was planned to involve the executive team and the Institutional Research Office. This second focus group was considered the "Achieving the Dream Core Team" focus group, while the initial focus group was titled the "Achieving the Dream Participants" focus group.

In the Achieving the Dream Core Team focus group, two representatives from the Institutional Research Office and one member of the executive leadership team participated. Two of the participants were female, and one was male; all three participants were between the ages of 25 and 44 years old. The three participants had all been employed at the college for less than three years, and all of them held graduate degrees. The two representatives from the Institutional Research Office held degrees in a statistical field, while the executive team member had gained experience with statistical analysis through on-the-job training, professional development activities, and college-level work. Two of the participants responded they used data to inform their daily activities multiple times each day, and one participant reported using data to inform daily

activities two to three times a week. Two of the participants were white, and one reporting being of Hispanic descent.

Table 4.14: Profile of College Two Core Team Focus Group Participants

Gender	*Male*	**1**	*Female*	**2**				
Age	*25-44*	**3**						
Length at College	*Less than 5 Years*	**3**						
Current Position	*Faculty*	**0**	*Administrator*	**1**	*Staff*	**2**		
Highest Credential	*Post-Graduate Degree*	**3**						
Experience w/Statistical Analysis	*On the Job Training*	**1***	*Professional Development Activities*	**1***	*College-Level Coursework*	**1***	*Degree/ Certificate in Related Field*	**2**
Use Data to Inform Work	*2-3 Times a Week*	**1**	*Multiple Times a Day*	**2**				
Race/Ethnicity	*White*	**2**	*Hispanic*	**1**				

Focus Group Flow. The focus was specifically scheduled to accommodate the attendance of representatives from the Institutional Research Office and the executive administrative team, and was therefore shortened to a 90-minute session. As the participants arrived, they were given a folder containing the excerpted section of the *Community College Inventory* and a copy of the staff/faculty profile questionnaire. When these had been completed, the group was asked to brainstorm together all of the key factors, concepts, or characteristics that influenced the development of a "culture of evidence" at their college. After approximately ten minutes, the group then silently captured the key words and phrases from their discussion on note cards, which were posted on the wall by the facilitator. The facilitator read the posted card aloud, and participants discussed responses that needed clarification. As responses were clarified, additional words and phrases were posted on the wall. The group was then asked to take ten minutes and discuss what might be missing from the responses on the wall that could

be added to create a more complete "picture" of the college's experiences. During this discussion, the facilitator encouraged participants to write down ideas as they were shared. When additional responses had been added to the wall and the group felt comfortable that the responses captured a fairly complete view of the college's efforts to create a data-driven culture, the participants all moved to the wall and organized the note cards into categories they felt into which the cards could be naturally divided. Once all of the responses were assigned to a grouping, the participants then named each category and identified the strong relationships they perceived existed between each category. The results were gathered from the wall, and the participants were dismissed.

Categories Developed in Focus Group. Five categories, or affinities, emerged from the note cards taped to the wall. These categories were *Responses to Institutional Gaps, External Factors, Institutional Gaps, Supporting Values,* and *Strategic Planning.* Of the total 35 responses captured on the note cards displayed on the wall, five were gathered under the title, *Responses to Institutional Gaps*. These responses included mention of staff skepticism towards data findings, employee fear of negative data results and possible punitive implications, a perception of "silos" existing between colleges in the district, and a level of staff acceptance of good and bad news.

The four cards that made up the group of *External Factors* focused on the implications of the college's efforts being framed in the larger context of the district's participation in Achieving the Dream. These response noted difficulties of working within a district structure, including the differences that exist between the four colleges in the district, a dependency on the district IT office that leads to "inadequate student information systems and processes," and leadership issues caused by the current vacancy in the district chancellor position. In contrast, the eight responses contained under

Institutional Gaps focused on the challenges and weaknesses within the college itself. The participants saw these challenges as being "related to [a] journey," in which "growing pains" led to progress over time. Two responses specifically addressed struggles in communicating data analyses across the college. Four note cards contained statements referring to the experience of staff in using and understanding data findings. The last two cards highlighted the college's challenges with its high growth rate, which has created a "human resource" crunch on campus.

The *Supporting Values* category was composed of eight cards, as well. Four responses mentioned the college's commitment to its values, stemming from the executive administrative team, and the manifestation of this commitment in the allocation of funds and other resources. Two of the cards asserted a general level of openness and collaboration throughout the institution, while the last two cards mentioned building a "culture of evidence" as an important value held by the college.

The fifth category, *Strategic Planning*, was composed of ten note cards. Half of the responses in this category referred to the college's strategic planning process as being data-driven and focused on informing outcomes and decisions. Two responses listed instruments used by the college to collect data (*CCSSE*, COLLEGE ONEE, SACE, and TAPE), and one response mentioned benchmarking. The last two responses just mentioned the strategic alignment and planning process in general.

Table 4.15: College Two Achieving the Dream Core Team Focus Group Categories (Affinities)

Categories (Affinities)		
Responses to Institutional Gaps	External Factors	Institutional Gaps
Supporting Values	Strategic Planning	

Perceived Relationships Between Categories. When asked to acknowledge strong relationships between the created affinity groups, the members of the Core Team focus group perceived that both the college's *Supporting Values* and *External Factors* were primary drivers of all of the categories. Both directly influenced the college's *Strategic Planning* process, which in turn influenced what the college does well and where *Institutional Gaps* occur. However, the participants felt that only the *External Factors* and the *Institutional Gaps* themselves strongly influenced *Responses to Institutional Gaps* at the college.

Table 4.16: College Two Achieving the Dream Core Team Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
F. Responses to Institutional Gaps G. External Factors H. Institutional Gaps I. Supporting Values J. Strategic Planning	A → B A ← B A <> B (No Relationship)

Composite Interview Affinity Relationship Table

Affinity Pair Relationship		**Affinity Pair Relationship**		**Affinity Pair Relationship**		**Affinity Pair Relationship**
A ← B		A x E		B → E		E ← D
A ← C		B → C		C ← D		
A x D		B x D		C ← E		

Figure 4.11: College Two Achieving the Dream Core Team Focus Group Cluttered Affinity Relationships

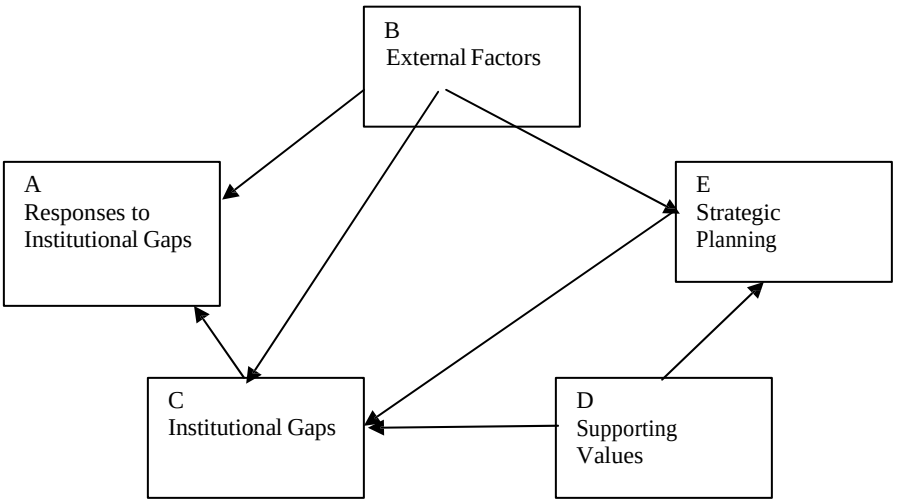
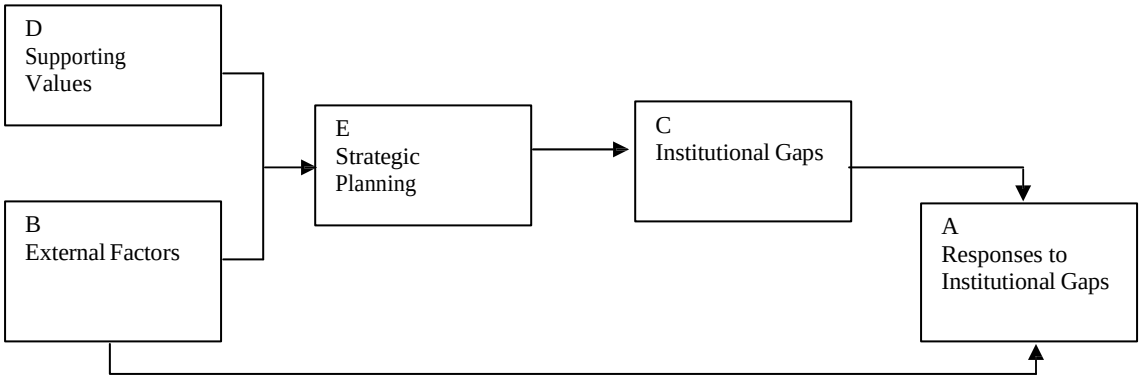


Figure 4.12: College Two Achieving the Dream Core Team Focus Group Uncluttered Affinity Relationships



Both the college's Supporting Values as well as External Factors drive the college's Strategic Planning, which in turn influence what the college does well and where Institutional Gaps occur. However, only External Factors and the Institutional Gaps themselves strongly influence how people at the college Respond to Institutional Gaps.

College Two: Achieving the Dream Participant Focus Group

Participant Profile. As explained above, originally only one joint focus group was scheduled for College Two's Achieving the Dream Core and Data Teams. However,

since no one from the Institutional Research Office or the executive administrative team attended this first focus group, a second focus group was scheduled. The second focus group was called the Achieving the Dream Core Team focus group because its participants included the representation from the executive administrative team. The first focus group, in contrast, was composed primarily of college employees appointed to sub-committees and taskforces underneath the college's Achieving the Dream umbrella. This group was called the Achieving the Dream Participant focus group. In many ways, this group was similar to College One's Achieving the Dream Data Team focus group, in that these participants were also responsible for encouraging the use of data in decision-making across campus but were not directly responsible for the leadership of the initiative. These participants had also had more exposure to the concept of a "culture of evidence" as defined by the initiative than their non-involved counterparts at the college.

Of the five employees who attended the Achieving the Dream Participant focus group, two were faculty members, two were administrators, and one was a staff member. All five participants were women between the ages of 25 to 55. None of the women had been at the college for more than ten years, and one participant had been employed by the college for less than five years. It is important to note, though, that the college is approximately ten years old, and these participants could have been at the college since it initially opened its doors. All of the women held graduate degrees. The participants provided varied responses to their exposure to statistical analysis knowledge, ranging from having had little or no exposure, having participated in related professional development activities, and having completed related college-level coursework. One woman had also participated in biomedical research in a previous position. The responses to the frequency of data usage to inform daily activities were also varied: three people

stated using data to inform daily tasks between 1 to 3 times a semester, one person reported using data at least once a week, and the last person reported using data in her daily tasks at least four times each week. Finally, two of the participants identified themselves as being of Hispanic origin, while three categorized themselves as being white.

Table 4.17: Profile of College Two Participant Focus Group Participants

Gender	*Male*	**0**	*Female*	**5**				
Age	*25-44*	**2**	*45-55*	**3**				
Length at College	*Less than 5 Years*	**1**	*5 Years to 10 Years*	**4**				
Current Position	*Faculty*	**2**	*Administrator*	**2**	*Staff*	**1**		
Highest Credential	*Post-Graduate Degree*	**5**						
Experience w/Statistical Analysis	*Little to No Experience*	**1**	*Professional Development Activities*	**1**	*College-Level Coursework*	**2**	*Other*	**1**
Use Data to Inform Work	*Once a Semester*	**1**	*2-3 Times a Semester*	**2**	*Once a Week*	**1**	*Four or More Times a Week*	**1**
Race/Ethnicity	*White*	**3**	*Hispanic*	**2**				

Focus Group Flow. The focus group followed the format set by previous focus groups. The questionnaire and inventory were completed at the beginning of the session, the group discussed the college's data-driven efforts in small groups and then captured words and phrases on note cards, the group separated note cards into categories and designated category names, and then the participants identified strong relationships between the categories. The entire focus group lasted a little more than two hours. The only difference in this group was that when the participants began to name their categories, they found multiple categories could be combined under one name and thereby decreased the ultimate number of separate categories formed in the process. This group also created a one-sentence explanation of each category that captured the reasoning behind why responses were grouped the way they were.

Categories Developed in Focus Group. Six categories were identified in the process of grouping the responses taped to the wall: *Growth Results, Need for Organizational Change, Students, Data and Planning, Processes,* and *Perceptions.* The *Growth Results* category consisted of 12 responses. Two of these responses noted the past successes of College Two as "pioneers" in student learning and as a model for other colleges. Multiple responses referred to recent growth in students at the college, the pressures this growth has caused, and the impact it has had on the institutional culture that existed when the college was smaller. This "pressure" included mention of limited scope, larger employee workloads, and communication confusion for new hires. One response discussed the importance of re-instigating past processes and procedures in addressing changes caused by growth, but two other responses indicated that drawing models and ideas from the college's history was discouraged by the administration.

Composed of 14 responses, the *Need for Organizational Change* category focused on the college's need to "improve and increase resources." Many of the responses imply divisions exist at the college between faculty and administrators, departments, age groups, and disciplines. As some of the responses indicate, these divisions cause less "open communication [than] there was before;" feelings of resentment, fear, and "burn out;" and often a duplication of efforts. One response specifically noted a college tendency to be "always searching for something new," and another response recommended "a reorganization for our organization."

The question, "How do we involve students in the process?" was used by the participants to summarize the *Students* category. Three note cards contained comments regarding types of students (non-traditional, returning, ethnically diverse), and three additional cards mentioned the importance of student expectations and input in

institutional planning and decision-making processes. Two responses warned that students at the college were overwhelmed by their expected participation in the collection of data, and that making a difference for students might not significantly change the results of collected student data. One card emphasized the importance of reminding students of "learning to learn."

Data and Planning, or "What do we plan to do with the data?" consisted of 17 note cards. Many of the responses dealt with how the college uses data: knowing what data are needed and how to follow-up on the data that are collected, maintaining the quality of data and thereby increasing trust in its results, learning to include the use of data and measurement tools in project management, and finding ways to work with external organizations to obtain and share current outcomes and results. One card mentioned a type of data needed to measure student success—income data vs. success rates—while two other note cards contained statements that intuition and informal data sources were important in measuring student progress and success.

The *Processes* category was described as a "cyclical pattern between data and processes." Of its 19 compiled responses, 12 note cards contained responses that led to "clos[ing] the gap in student success" through process changes, including using available support systems, evaluating instructional performance, opening communication channels, improving performance in developmental coursework, and looking at trends to improve class offerings and student performance. Two responses questioned the availability of resources in supporting culture change, one response complained that the "same people [are] involved in the process every time." However, one response congratulated the college's administration on "beginning to plan and make changes of use of data."

The final category, *Perception*, referred to "how people see data and communicate conflicts that exist." Five responses mentioned a perception that there was a plethora of data at the college but a lack of useful information drawn from the data. Three cards noted that many employees believed they were not asked to share successful data with others at the institution, and data efforts therefore ultimately "fizzle out." Finally, the remaining responses noted a level of suspicion and fear among employees that things that are good for student success might be "non-measurable" and will get overlooked in a push to use measurable outcomes.

Table 4.18: College Two Achieving the Dream Participants Focus Group Categories (Affinities)

Categories (Affinities)		
Growth Results	Need for Organizational Change	Students
Data & Planning	Processes	Perception

Perceived Relationships Between Categories. The participants in the Achieving the Dream participants focus group saw the *Growth Results* at the college influencing *Student Involvement* in institutional processes, which drove the *Perceptions* of people at the college regarding data and communication. These *Perceptions* in turn drove *Data and Planning*, which led to a *Need for Organizational Change* and the use of specific institutional *Processes.* The *Need for Organizational Change* category was also perceived as influencing college constituents' *Perceptions*.

Table 4.19: College Two Achieving the Dream Data Team Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
H. Growth Results I. Need for Organizational Change J. Students K. Data & Planning L. Processes M. Perception	A → B A ← B A <> B (No Relationship)

Composite Interview
Affinity Relationship Table

Affinity Pair Relationship		**Affinity Pair Relationship**		**Affinity Pair Relationship**		**Affinity Pair Relationship**
A → B		A → F		B → F		D → E
A → C		B ← C		C → D		D ← F
A → D		B ← D		C → E		E ← F
A → E		B → E		D → F		

Figure 4.13: College Two Achieving the Dream Participant Focus Group Cluttered Affinity Relationships

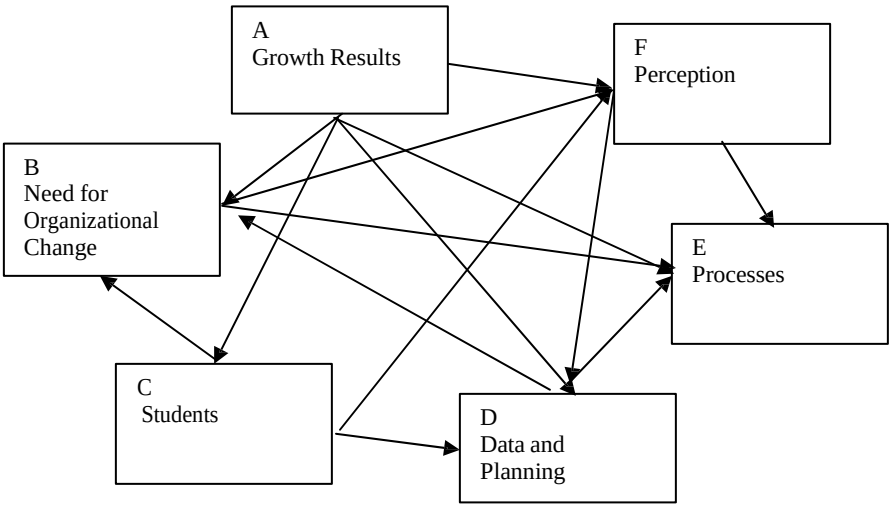
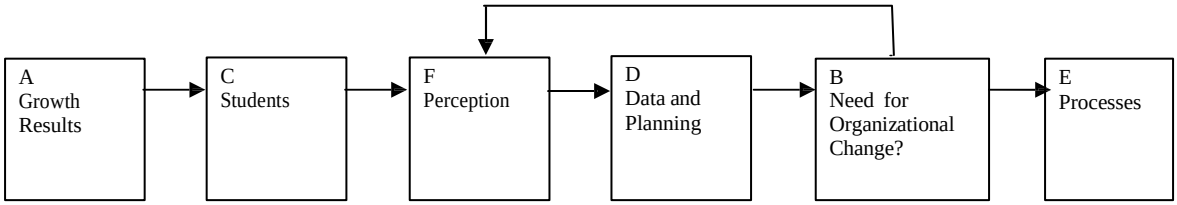


Figure 4.14: College Two Achieving the Dream Participant Focus Group Uncluttered Affinity Relationships



The Results of Growth at the college influences Student Involvement in processes, which drives the Perceptions of people at the college regarding data and communication. These perceptions in turn drive data and planning, which lead to a Need for Organizational Change as well to the use of specific college Processes. The Need for Organizational Change also influences college constituents' perceptions.

College Two: Staff Focus Group

Participant Profile. In preparation for the staff focus group at College Two, the college's Institutional Research Office sent an electronic invitation to all full-time staff members at the college to participate in the session. Of those invited, seven staff members attended the session. Five of these participants were female; two were male. Two people fell between the ages of 25 to 44, while the other three were 45-years-old or older. One participant had been employed by the college for more than ten years, four had been at College Two for between 5 to 10 years, and two participants had been at the college for less than five years. Of those that attended, six identified themselves as staff, and one—a librarian—self-identified as a faculty member, though the nature of her work was similar to that of other staff positions. Four of the participants had completed a Bachelor's degree or higher, and the other three participants had only completed an associate's degree. In regard to their exposure to statistical analysis, two noted having little or no exposure, while others responded as having gained statistical experience through college-level coursework, on-the-job training, self-directed learning, and military experience. One participant even had a degree or certificate in a field related to

qualitative research. Four of the respondents mentioned using data to inform daily tasks at least 2 to 3 times a semester, while the other three respondents mentioned using data in their work at least once a week. When asked to identify their race and ethnicity, three indicated being Hispanic, two white, one African American, and one Asian/College Pacific Islander.

Table 4.20: Profile of College Two Staff Focus Group Participants

Gender	*Male*	**2**	*Female*	**5**				
Age	*25-44*	**2**	*45-55*	**3**	*55+*	**2**		
Length at College	*Less than 5 Years*	**2**	*5 Years to 10 Years*	**4**	*11 Years to 15 Years*	**1**		
Current Position	*Faculty*	**1**	*Administrator*	**0**	*Staff*	**6**		
Highest Credential	*Associates Degree*	**3**	*Bachelor's Degree*	**1**	*Post-Grad Degree*	**3**		
Experience w/Statistical Analysis	*Little to No Experience*	**2**	*On the Job Training*	**2***	*Self-Directed Learning*	**1***		
	College-Level Coursework	**3***	*Degree/ Certificate in Related Field*	**1***	*Other*	**1***		
Use Data to Inform Work	*2-3 Times a Semester*	**4**	*Once a Week*	**1**	*2 to 3 Times a Week*	**2**		
Race/Ethnicity	*African American*	**1**	*White*	**1**	*Hispanic*	**6**	*Asian/Pacific Islander*	**1**

* One or more participants reported two of the listed responses.

Focus Group Flow. Lasting two hours in length, the College Two staff focus group followed the same structure as the other focus groups, namely beginning with the completion of the inventory and questionnaire, the small group work and silent brainstorming activities using note cards, and the group clarification of words and phrases written on the note cards. After the responses were reviewed by the group, the facilitator asked the participants to again discuss in small groups what might be missing from the responses on the wall regarding the development of a "culture of evidence" that would significantly contribute to a third party's understanding of the college's experience. After five minutes, the participants then shared with the entire group the

comments made in the smaller group discussions, and the facilitator captured words and phrases on note cards as the group spoke. These cards were shared with the group, and those cards the group felt accurately captured concepts from their discussion were added to the rest of the note cards attached to the wall. A few more responses were captured after this step as the group reviewed the note cards on the wall, and the participants were asked to organize the cards into groups. Five of the seven participants reordered the cards on the wall, and then the entire group discussed where the remaining cards should be placed. The groups were given names, and some of the categories were reorganized in the process. When the last category name had been agreed upon, the group formed a one-sentence summary describing the meaning of each category name, and then relationships between the categories were identified according to the model used in the previous focus groups.

Categories Developed in Focus Group. Seven categories were formed from the responses displayed on the wall: *Goals/Motivation, Use of Data, Communicating Data, Benchmarking, Initiatives/Outcomes, Perspectives of Initiatives,* and *Surveys*. In the *Goals/Motivation* category, described as the "reason for collecting data," three responses listed the need to better serve the Hispanic community—in that percentage of the student body that is Hispanic should be representative of the demographics of the college's service area—and the use of the Baldrige Award in setting college goals. The *Use of Data* category consisted of four times as many responses. Two responses noted the effectiveness of and broad involvement in the most recent strategic planning process, and two more responses described the college as "using data effectively" and adopting an "objective, detached, [and] impersonal" approach to the use of data. Four responses, though, indicated that while there was a plethora of data at the college, the extent to

which different departments and individuals across campus used the data to implement change varied dramatically. One response inferred that retention data was not tracked at the college, and one response made the claim that data was at times used to "rationalize favored outcomes." Despite this, the participants felt that the use of data led to a "continual process of improvement."

Communicating Data dealt with the "appropriate distribution of data (not too much, not too little)," and consisted of nine responses. The responses fell into two groups: those that focused on who was responsible for analyzing and communicating data, and those that discussed current limitations in the college's data communication process. The former group of responses was smaller and noted the executive administrative team was responsible for data analysis and dissemination. The responses also noted that staff and faculty were perceived as only being recipients of this process and not participants. In the latter group of responses, comments indicated that information wasn't always readily available and that some individuals and departments were better informed than others.

Composed of six responses, *Benchmarking,* or the act of "evaluating internally and externally," focused on the college's recent interest in measuring itself against similar institutions. One card mentioned the college's tendency to "look at data like we're the first to deal with the problem," while four responses specifically mentioned national benchmarking efforts. Two responses mentioned the need to focus on what the college wasn't doing well instead of concentrating on the college's strengths and successes.

The largest category, *Initiatives/Outcomes,* contained 15 responses. Seven of these responses referred to examples of initiatives the college was involved in, including Achieving the Dream. Three responses mentioned the goals of Achieving the Dream: a

focus on the successful completion of gatekeeper courses and developmental coursework, specifically for Hispanic students. While the participants felt the college had a "strong willingness to become data-driven," though, responses also indicated that more employee development and advancement opportunities were needed for initiatives to be successful. The group defined *Initiatives/Outcomes* as "the responses to the evaluation of data. On the other hand, *Perspectives of Initiatives* were seen as the "different perspectives" that existed among "different groups." This category was composed of eight responses. Participants noted the perception that the college's initiatives set the institution's priorities and decided what is measured and what is considered important. Multiple responses also indicated a belief that the college was involved in too many initiatives, that efforts overlapped, and that staff were spread thin across the many initiatives.

The last category, *Surveys,* or "methods of collecting data," consisted of four responses listing tools the college used to collect data. These included end-of-term surveys, college environment surveys, student surveys, and a newly implemented ESL placement survey.

Table 4.21: College Two Staff Focus Group Categories (Affinities)

Categories (Affinities)			
Goals/Motivation	Use of Data	Communicating Data	Benchmarking
Initiatives/ Outcomes	Perspectives of Initiatives	Surveys	

Perceived Relationships Between Categories. Participants of the College Two staff focus group perceived the *Initiatives/Outcomes* driving the *Surveys* used at the college, which in turn set the *Goals/Motivation* for the institution. These goals were seen as driving the *Use of Data* and how the college was *Communicating Data.* However, the

Use of Data and *Communicating Data* were not strongly related to each other. The *Use of Data* did appear to determine how *Benchmarking* is used by the college, and *Communicating Data* influenced the *Perspectives of Initiatives* held at the institution.

Table 4.22: College Two Staff Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
G. Goals/Motivation H. Use of Data I. Communicating Data J. Benchmarking K. Initiatives/Outcomes L. Perspectives of Initiatives M. Surveys	A → B A ← B A <> B (No Relationship)

Composite Interview Affinity Relationship Table

Affinity Pair Relationship		**Affinity Pair Relationship**		**Affinity Pair Relationship**		**Affinity Pair Relationship**
A → B		B x C		C ← E		E → F
A → C		B → D		C → F		E → G
A → D		B ← E		C ← G		F x G
A ← E		B x F		D ← E		
A x F		B ← G		D x F		
A ← G		C x D		D ← G		

Figure 4.15: College Two Staff Focus Group Cluttered Affinity Relationships

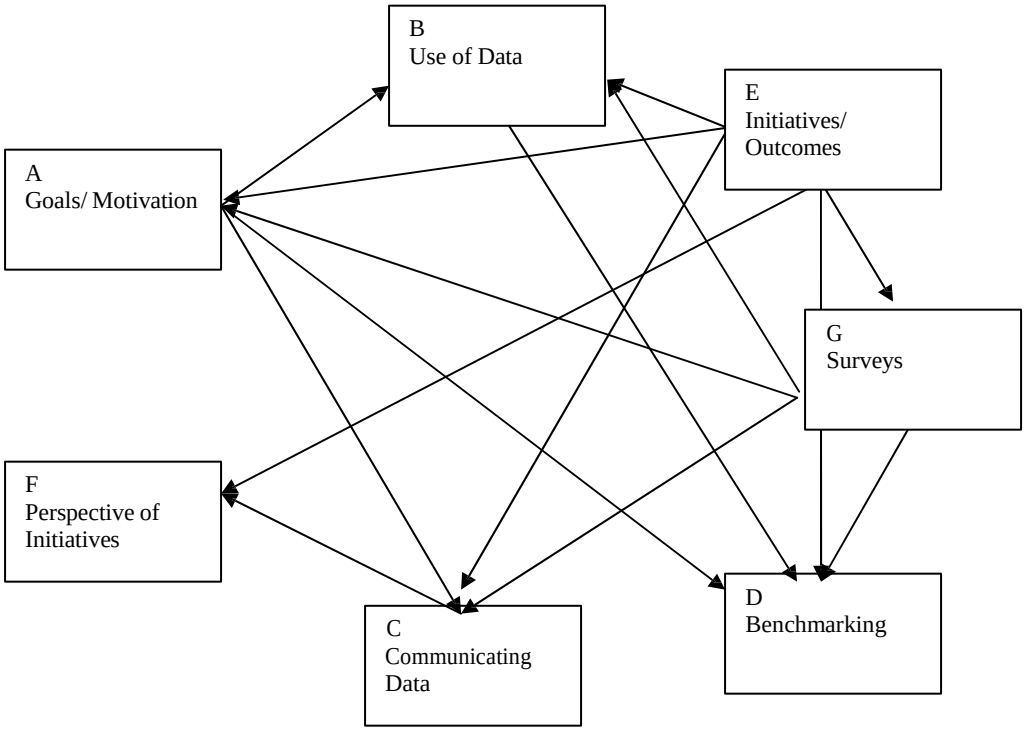
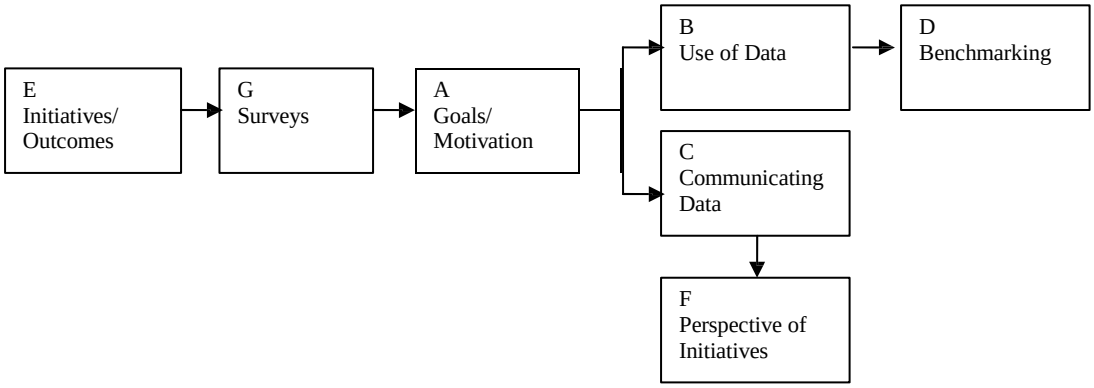


Figure 4.16: College Two Staff Focus Group Uncluttered Affinity Relationships



Initiatives and their outcomes drive the surveys used at the college, which in turn set the goals and motivation for the institution. These goals and motivations drive the use of data and how data are communicated, which are not strongly related to each other. The use of data determines how benchmarking is used by the college, and how the data are communicated influences the perspectives different groups at the institution have of the initiatives.

College Two: Faculty Focus Group

Participant Profile. In choosing the sample for College Two's faculty focus group, the Institutional Research Office provided the researcher with a list of all faculty members not appointed to an Achieving the Dream committee or taskforce that were teaching during the current semester. The researcher first took the list and deleted duplicates of any of the faculty names listed, followed by eliminating the names of every listed faculty member who had a class scheduled during the time of the focus group. From the remaining list, the researcher eliminated any faculty names whose email was not provided, as the invitation to participate would be sent electronically. The remaining 148 faculty names were then sorted into six departments based upon the courses being taught during the current semester. The purpose of this sorting was to gain a broader sample from across the college to better measure the extent to which shared perceptions of a "culture of evidence" had permeated the institution. Once stratified by department, the faculty names were then selected randomly through the use of an online random number generator. Fifteen faculty were selected from each department cluster, with 90 people in total. All of the 90 selected faculty members were sent an email invitation to participate in the faculty focus group. Of those that were invited, 10 attended, representing five of the six department clusters.

Six of the participants in the faculty focus group were male, and four were female. Half were between the ages of 25 to 44 years old, one was between the ages of 44 to 55, and four were older than 55. Six participants had been employed by the college for less than five years, while the remaining four had been at the college for less than ten years. All of the participants held graduate degrees. In regards to their exposure to statistical analysis, four faculty cited having completed college-level coursework, two had had on-

the-job training, one had done some related self-directed learning, and half indicated they had had little to no experience with qualitative research methods. One participant responded as using data to inform daily tasks less than once a semester, six participants said they used data in their daily work at least once a semester, and two indicating doing data-driven daily tasks more than four times a week (one participant did not respond). Finally, nine of the faculty members were white; one faculty member identified himself as having an ethnic or racial descent different from those listed on the profile.

Table 4.23: Profile of College Two Faculty Focus Group Participants

Gender	*Male*	**6**	*Female*	**4**				
Age	*25-44*	**5**	*45-55*	**1**	*55+*	**4**		
Length at College	*Less than 5 Years*	**6**	*5 Years to 10 Years*	**4**				
Current Position	*Faculty*	**10**	*Administrator*	**0**	*Staff*	**0**		
Highest Credential	*Post-Grad Degree*	**10**						
Experience w/Statistical Analysis	*Little to No Experience*	**5**	*On the Job Training*	**2***	*Self-Directed Learning*	**1***	*College-Level Coursework*	**4***
Use Data to Inform Work	*Less than One Time a Semester*	**1**	*1 Time a Semester*	**2**	*2-3 Times a Semester*	**4**	*4 or More Times a Week*	**2**
Race/Ethnicity	*White*	**9**	*Hispanic*	**0**	*Other*	**1**		

* One or more participants reported two of the listed responses.

Focus Group Flow. The same format and process used in the previous focus groups were also used in focus group held for faculty at College Two. After completing the inventory and profile forms, the participants were divided into groups of 3 or 4 to discuss what key elements they felt made up the college's efforts to become data-driven. As with the faculty focus group at College One, the faculty participants in this focus group were also given a compiled list of the affinities identified in the college's Achieving the Dream participants focus group (because of rescheduling, the Core Team focus group was not held until after the faculty and staff sessions had occurred, and

therefore it was impossible to share the affinities from the Core Team with the other constituent groups). Silent brainstorming led to further discussion, the sorting of cards into categories, the naming of categories, and finally the identification of strong relationships between categories.

Categories Developed in Focus Group. Six categories were formed in the process of sorting the 56 responses into similar groupings: *Indicators, Measurement Tools, Use of Data, Potential/Common Problems, Institutional Limitations,* and *Data Users*. *Indicators* were described as "What is measured," and contained 12 responses. These responses covered a range of measurable items, including larger programs to individual students' critical thinking skills, reading ability, and prior learning. Responses also included measures of student success, such as retention, success rates, passing of gatekeeper courses, and demographic factors. One additional response warned, though, that "success rates do not necessarily equal student learning."

What the college used to measure student success, or its *Measurement Tools*, was the second category, composed of eight responses. Results included the mention of multiple student surveys, such as end-of-term student course feedback forms, *CCSSE*, SACE, and PACE. The participants also noted external forces that influenced the use of measurement tools, such as community needs and benchmarking efforts. The *Data Use* category consisted of nine responses answering the question, "What do we do with the data?" Five of the responses dealt with the use of data to set goals and evaluate outcomes in order to make improvements at the college. The other four responses discussed how data usage impacted faculty at the institution. Data usage was linked to promotion and tenure decisions, hiring practices (especially for adjuncts), and faculty development. One response also noted that "faculty change depends on data," though discussion in the

session had questioned whether data were only influential for newer faculty or for all faculty members.

Potential/Common Problems consisted of six responses describing challenges that were perceived as being common to community colleges across the nation. These challenges included problems with data being "really specific or really general," issues with faculty buy-in to surveys and other research instruments, and a difficulty in identifying how external forces outside the college's control impact institutional culture and student success. In contrast, the *Institutional Limitations* category listed 14 challenges perceived to be more unique to this institution. Many responses denote a lack of direction or focus in the use of data at the institution, leading to the collection of data that are "too general" and "limited in scope." Two responses mentioned the limited use of data currently collected in implementing change. Another three responses noted a feeling that faculty were "doing one more damn thing" without experience in using data, and that data tended to be used in "back patting" good news about the college while bad news was ignored. However, the last two responses argued that the college's "heart is in the right place."

The last category, *Data Users*—those who collect and compile the data—was composed of seven responses. Three responses specifically mentioned the Institutional Research (IR) Office, and the rest generally discussed this office's role and responsibility in data collection and usage. Two responses questioned the timeliness and reliability of the IR office, and one questioned who at the college decided which surveys would be administered. The final response noted that data collected at the college remained generic because no one at the institution was "charged with creating instruments."

Table 4.24: College Two Faculty Focus Group Categories (Affinities)

Categories (Affinities)		
Indicators	Measurement Tools	Use of Data
Potential/Common Problems	Institutional Limitations	Data Users

Perceived Relationships Between Categories. In identifying existing relationships between categories, the participants perceived the *Indicators*, or what is measured, drove the *Measurement Tools* used. The *Measurement Tools* in turn influenced who collected and compiled the data, or the *Data Users.* The *Data Users* then influenced in a cyclical way the *Indicators* measured as well as the *Use of Data*. Meanwhile, the *Measurement Tools* were seen as perpetuating *Potential/Common Problems* with using data, which in turn influenced *Institutional Limitations* in using data. *Data Users* also were seen as influencing *Institutional Limitations*. Interestingly, the group saw no strong relationship between *Indicators* and *Potential/Common Problems, Indicators* and *Institutional Limitations, Measurement Tools* and *Institutional Limitations,* the *Use of Data* and *Potential/Common Problems,* and between *Data Users* and *Potential/Common Problems*.

Table 4.25: College Two Faculty Focus Group Affinity Relationship Table

Affinity Name	**Possible Relationships**
F. Indicators G. Measurement Tools H. Use of Data I. Potential/Common Problems J. Institutional Limitations K. Data Users	A → B A ← B A <> B (No Relationship)

Composite Interview
Affinity Relationship Table

Affinity Pair Relationship		Affinity Pair Relationship		Affinity Pair Relationship		Affinity Pair Relationship
A → B		A ← F		B → F		D → E
A → C		B → C		C x D		D x F
A x D		B → D		C → E		E ← F
A x E		B x E		C → F		

Figure 4.17: College Two Faculty Focus Group Cluttered Affinity Relationships

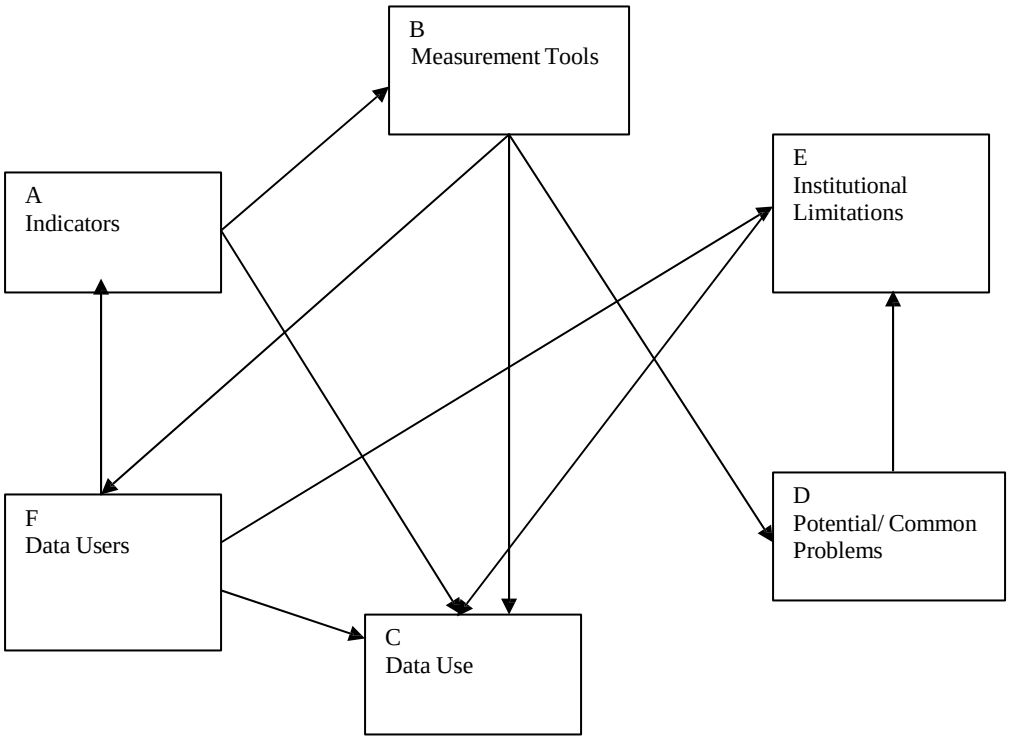
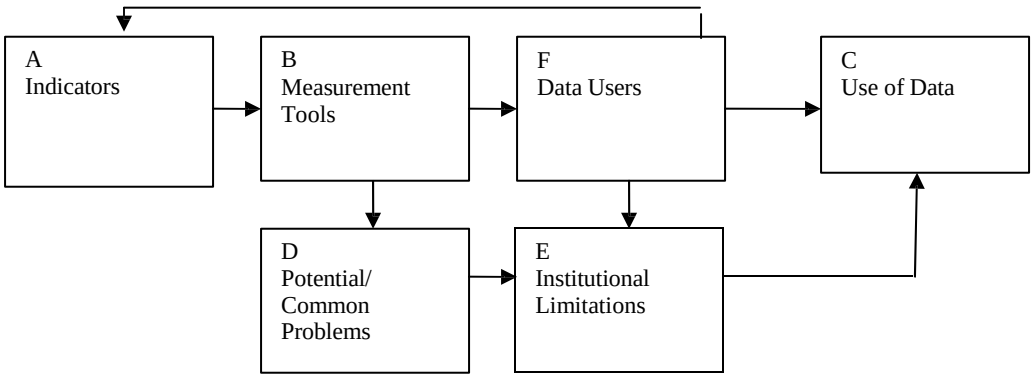


Figure 4.18: College Two Faculty Focus Group Uncluttered Affinity Relationships



What is measured drives the tools used to measure, which in turn influences who collects and compiles the data (the data users). The data users then influence what is measured and how the data are used. The measurement tools perpetuate commons problems with using data, which in turn influences institutional limitations in using data. Data users also influence institutional limitations

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College Two: All Focus Group Comparison

After data were collected from each of the four focus groups at the college, cluttered Affinity Relationship Figures (ARDs) were created for each set of affinities. These cluttered ARDs were then organized into an uncluttered format that eliminated relational lines duplicated in the existing figures. Once all four uncluttered ARDs were completed, affinities from the four focus groups were compared to each other, and similar themes between focus group results were color-coded. Where multiple similar affinities existed, the researcher noted how perceived relationships between these affinities agreed or differed between uncluttered ARDs. Seven themes emerged across the developed affinity groups.

Institutional Limitations Due to Growth. Affinities from three of the four focus groups included mention of institutional gaps or limitations due to recent growth at the college as a main theme in creating a "culture of evidence" at College Two. Each of the groups specifically mentioned limitations with human resources—that employees are "spread thinly" across the college. In addition, the three groups noted a general lack of

experience on the part of college employees in using data. The fourth group—the Staff group—also noted a resource crunch in staffing, even though the group didn't specifically cite it as a major category.

Internal Perceptions of Use of Data. Perceptions of college employees regarding the use of data were discussed in three of the focus groups. Both the Achieving the Dream Core group and the Staff group saw perceptions as the end result of the college's efforts to establish and maintain data-driven practices. On the other hand, the Achieving the Dream Participants group perceived employee perceptions as driving how data are used, what organizational changes need to be made, and which processes are implemented. Interestingly, all of the *perception* categories focused almost exclusively on negative responses to the institution's emphasis on data.

Communication/Data Dissemination. The communication and dissemination of data was only emphasized in the results of two of the focus groups. One group felt that recently communication at the college had become less open with more divisions between administrators, faculty and staff. This change was attributed to institutional growth. The other group noted the difficulty in sharing enough information without overwhelming employees and felt that administrators focused more on disseminating data than on discussing it with staff. Though not listing it as a category, the Core team also discussed communication and felt that while the college was good at disseminating data, communication could always be improved.

Institutional Values/Goals. The Core group saw the values of the institution driving all of the work at the college in establishing data-driven processes, while the Staff group perceived the institutional initiatives and the data that were thereby collected as setting the goals and values of the college. Interestingly, while leadership wasn't

specifically listed in any of the groups, multiple groups mentioned the positive influence of the president in conversation during the sessions. Also interesting to note is that all four of the groups talked with pride about how College Two was different from the other colleges in the district, alluding to the values inherent in the institution's culture.

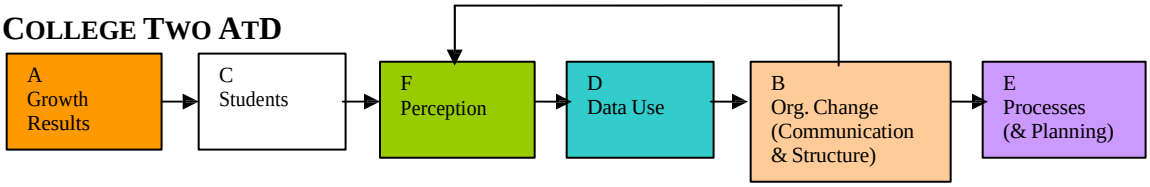
Data Usage. The use of data arose in the themes of three of the groups. The question for two of the groups was, "What do we do with the data?" The groups seemed to share the view that the college has made progress in applying data to goal formation and planning processes, but that the institution is still new at using data to inform and guide decision making. One group also perceived that data were sometimes used to "rationalize favored outcomes" instead of objectively informing the selection of response strategies.

Measurement Tools. While only two groups had categories focused on measurement tools used at the college, almost all of the groups listed multiple survey instruments used at the institution. Interestingly, none of the groups discussed specific items or characteristics of the measurement tools, and instead they tended to clump the instruments together in one group.

Institutional Planning. The importance of institutional planning was emphasized in the results of two of the focus groups, although the views on the influence of planning differed between the groups. The Core group saw planning as an intermediary step between the values of the college and institutional gaps that exist. The Achieving the Dream Participants group perceived planning to be the end result of the data implementation process with little influence on student involvement, internal perceptions, or the use of data.

Figure 4.19: College Two Focus Groups Affinity Relationship Figures (ARDs) Comparison

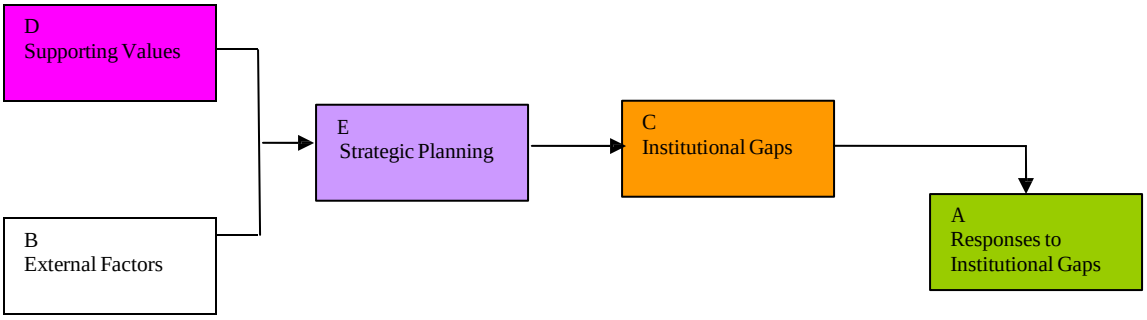
COLLEGE TWO ATD



SUMMARY OF RELATIONSHIPS:

The Results of Growth at the college influences Student Involvement in processes, which drives the Perceptions of people at the college regarding data and communication. These perceptions in turn drive data and planning, which lead to a Need for Organizational Change as well to the use of specific college Processes. The Need for Organizational Change also influences college constituents' perceptions.

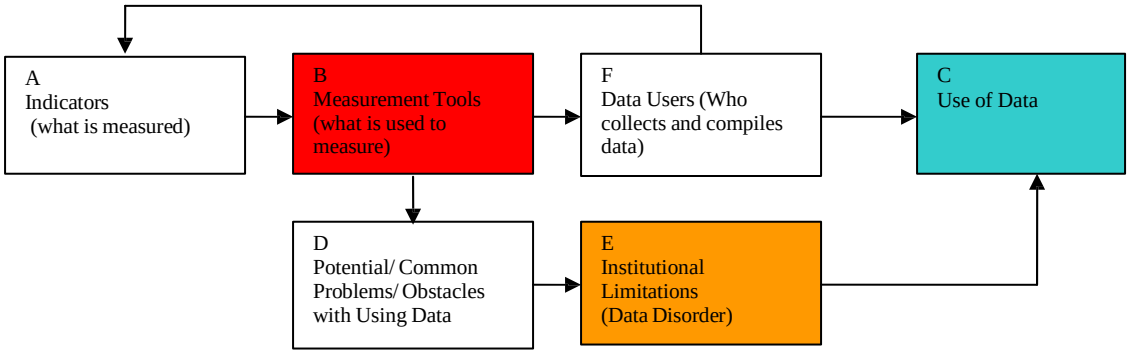
COLLEGE TWO CORE



SUMMARY OF RELATIONSHIPS:

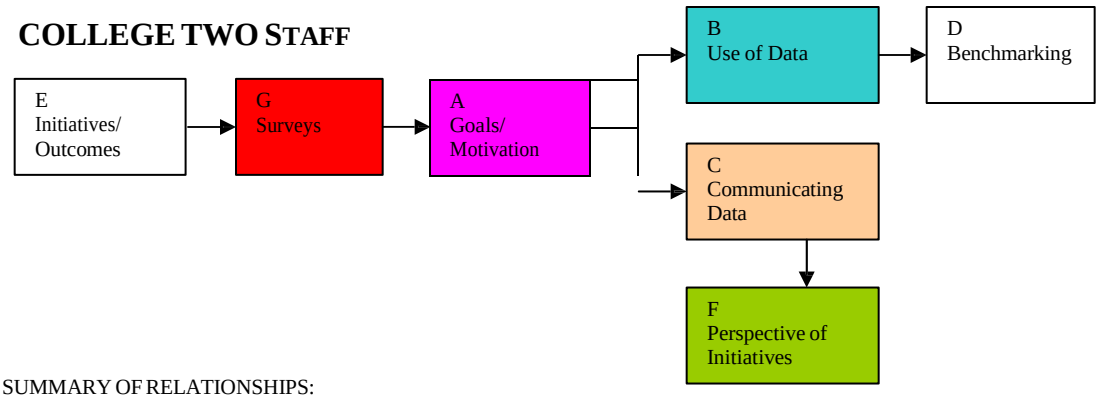
Both the college's Supporting Values as well as External Factors drive the college's Strategic Planning, which in turn influence what the college does well and where Institutional Gaps occur. However, only External Factors and the Institutional Gaps themselves strongly influence how people at the college Respond to Institutional Gaps.

COLLEGE TWO FACULTY



SUMMARY OF RELATIONSHIPS:

What is measured drives the tools used to measure, which in turn influences who collects and compiles the data (the data users). The data users then influence what is measured and how the data is used. The measurement tools perpetuate commons problems with using data, which in turn influences institutional limitations in using data. Data users also influence institutional limitations, and institutional characteristics influence how data is used.



SUMMARY OF RELATIONSHIPS:

Initiatives and their outcomes drive the surveys used at the college, which in turn set the goals and motivation for the institution. These goals and motivations drive the use of data and how data is communicated, which ar enot strongly related to each other. The use of data determines how benchmarking is used by the college, and how the data is communicated influences the perspectives different groups at the institution have of the initiatives.

Institutional Limitations Due to Growth

Internal Perceptions of Use of Data

Communication/Data Dissemination

Institutional Values/Goals

Data Usage

Measurement Tools

Institutional Planning

College Two: President Interview

After the focus groups were held at College Two, an hour-long interview was conducted with the college's president in order to compare her perceptions of the college's efforts to develop a data-driven culture with the perceptions of the employees in the focus groups. The interview consisted of eight open-ended questions regarding the president's understanding of the development of a "culture of evidence" at her institution.

The president was encouraged to elaborate on her experiences and insights, and a few of the eight questions were not posed as their answers were given in the participant's responses to other questions. The interviewee was also asked to provide additional information that applied to the issue but that hadn't been addressed in her previous responses, and these comments were also captured.

The audio recording of the interview was transcribed and coded by the researcher. The coding consisted of the marking of ideas and phrases that occurred multiple times during the interview, and then the grouping of these passages into groups. Once the groups had been established, they were then sorted into larger categories based upon group similarities. The larger category, or theme, was given a name, and sub-categories were denoted. Five themes were identified from the comments captured in the president's interview: *Strategic Planning, Communicating Data, Making Data Usable, Continuous Improvement,* and *Collaboration*.

Strategic Planning. The importance of strategic planning emerged as a theme at the very beginning of the interview and was mentioned throughout the hour-long discussion. Strategic planning was seen of consisting of three sub-categories: the general use of strategic planning, an emphasis of focusing college efforts, and the importance of institutional processes in promoting data-driven change. First, the president spoke of the college's efforts over the last ten years to improve the strategic planning process at the college. As she noted, the college has "a pretty good strategic planning process" that has been designed to build off of data on student performance outcomes (Lines 8-9). The interviewee noted that this data had been used to "see where gaps are in terms of our

Table 4.26: College Two President Interview Themes and Sub-Affinity Groups

Strategic Planning	
	Use of Strategic Planning
	Focusing Efforts
	Importance of Institutional Processes
Communicating Data	
	Sharing Best Practices
	Capturing Data at the College
	Making College Aware of Gaps
	Promoting Institutional Reflection
Making Data Usable	
	Training Staff on How to Use Data
	Simplify Data Collection & Analysis
	Benchmarking
Continuous Improvement	
	Improvement Happens Over Time
	Using Continuous Quality Improvement Approach
Collaboration	

strategic plan" as well as "develop initiatives and projects" (Line 11; Line 24). The interviewee also emphasized that the strategic planning process had evolved over a ten-year period, and the capability the college had now to focus on data was the result of this longer period of development.

The president specifically noted that the strategic planning process had improved over time as the college learned to focus its efforts and prioritize its allocation of resources. As she recalled,

> …Focus. There was a tendency always, and I noticed this from the very first time I was ever involved in planning…we tried to do too much. And it wasn't that we didn't need to do those things. They were all things that we needed to do. But we weren't going to get to all of them that year, or even that three years. So we've gotten more focused (Lines 229-238).

Again, this process of focusing the college's efforts was described as a long-term initiative, something that the college "tweaked" over time. This "tweaking" occurred in the yearly development of the strategic plan as well as in the formation of the college's

values and vision statement. As the college focused its efforts, the president contended, it was better able to measure its progress towards implementation of the strategic plan, and goals for sub-units at the college became more measurable as well. The president explained, "But that's the sort of lesson learned over time. It's just about focus, focus, focus" (Lines 266-267).

The final sub-category of *Strategic Planning* centered on the importance of institutional processes in general as they pertain to the effectiveness of data-driven cultural changes. The president noted the need to "create an infrastructure and some systems that help us move toward innovative approaches" (Lines 123-124). She also asserted that in creating a data-driven environment at the institution, "it's not about individuals, it's about what we do and that processes that we have to function in" (Lines 208-209).

Communicating Data. The second theme running through the comments made during the president's interview was a spotlighting of the importance of communicating data to all internal constituencies. Important to communicating data was capturing data on the work of the college, communicating an awareness of the gaps in student performance identified by the data, sharing best practices that existed at the institution, and continually promoting institutional reflection of its results. The interviewee emphasized the significance of recording the outcomes of the programs and projects undertaken at the institution. An emphasis was placed on implementing measurement strategies at all levels of the institutions, including disciplines, departments, and programs. The president asserted that each program needed to answer "How [they] are going to measure whether [they're] successful, and we're going to record that" (Lines

147-148). When these measurements had been recorded, the president stated the next step was "talking about it, always being out there talking it up" (Line 132).

"Talking up" the recorded data from each college program led to two outcomes. First, the data created an awareness of gaps that existed in student performance that the college community might not normally be aware of. The president explained:

> You think you're doing really well, like our enrollment in general looks really good. We've grown a lot, but we had some data that showed that while our numbers were growing, our percentages of Hispanic students in those numbers were declining. Now, it's not a huge decline, but it's enough to show a downward trend. And that data says to me that we're not reaching some of our Hispanic population (Lines 12-17).

The president further noted that, "It's really easy to say you're doing a good job, but you don't really know if you're doing a good job" (Line 47). Second, an awareness of the results of the college's programmatic efforts can emphasize areas where the college is highly successful. And, the interview noted, "When we see something really good, then we can begin to figure out how to share that with other groups" (Lines 148-150). When certain programs show promising results, they are seen "internally as a best practice," and this can be communicated throughout the institution.

Finally, the president asserted that communication efforts were driven by the college's willingness to reflect as an institution on the results of student performance outcomes. The interviewee noted it was the responsibility of the "senior leadership team in the college to figure out some way to engage in keeping the institution looking at itself" (Lines 271-272). Two ways the college promoted self-reflection were listed: participation in accreditation activities and in externally driven continuous improvement programs, such as the Texas Award for Performance Excellence (TAPE) and the Baldrige Award.

Making Data Usable. The third theme—presenting data in a way that all college employees can access and apply it—consisted of three sub-groups: training staff how to use data, simplifying data collection and analysis processes, and benchmarking. The president spoke at length about the need to address a general reluctance among staff to engage data. She explained,

> I think one of the obstacles [to a "culture of evidence"] is that the whole idea of data and statistics scares people…Most people, they either don't think they can read it, they don't bother to look at it, they're intimidated by it, whatever. Those are the things that they do (Lines 216-17, 223-225).

This general discomfort of staff towards the use of data, though, was perceived by the president as changeable through training opportunities. She noted, "With some not very sophisticated training you can teach people that they can do it" (Lines 218-219). Central to this training is the need to "educate people about how do you measure your success" (Lines 40-41). The president mentioned that more emphasis had been placed at the college in the past in providing this training, and that the college needed to recommit to these training efforts in the future.

Key to helping staff apply data to their daily decisions and activities is framing it in a way that is clear and convenient. The president noted that the college wasn't "doing a particularly good job of providing an analysis that gave people a framework for what to do to improve" (Lines 221-222). She explained that often institutional researchers had a tendency to create complex and tedious tracking and analysis systems that required lots of time and expertise to use. Instead of creating such systems, the interviewee asserted that colleges should ask, "So what? We got this measure: what good is it to anybody?" (Line 194). The goal to promote a data-driven environment, she contended, is to find "a real simple measure, that they can use" (Line 79).

Finally, the president expressed the belief that data made more sense to college employees when they could be compared against similar data at other like institutions. Benchmarking was listed as important in framing institutional data. For example, the president noted:

> You look at your graduation rate for example, and you say, okay our graduation rate is improving. But we're still not where we need to be because look at these other institutions out here. They're doing a lot better. And so we start looking at other ways to improve (Lines 209-212).

The president perceived that when the data collection and analysis processes at an institution were simplified, the staff were trained to use data, and all employees were involved in benchmarking their efforts against like institutions, the college would establish an environment in which all decision-making and planning was data-driven.

Continuous Improvement. Another theme embedded in the comments made during the president's interview was that of continuous improvement. For years, the college had participated in continuous improvement organizations and activities, such as the Continuous Quality Improvement Network (CQIN), the Texas Award for Performance Excellence (TAPE), and the Baldrige Award. As mentioned previously, these associations were seen as vital in encouraging institutional self-reflection. The president drew upon continuous improvement philosophies and terminology in her comments to frame the college's progress in developing a culture driven by the use of data. For example, the president spoke of improvement efforts as building blocks built over time. She explained,

> You don't go out there and say, we're going to create a "culture of evidence." To me, it's like these building blocks, and so I remember the first things I did to begin to create those building blocks…but that took a long time" (Lines 172-174, 189).

Multiple times, the interviewee mentioned process over point-in-time—the idea that "You never really get there. It's just a journey, a journey" (Lines 212-213). Framing data collection and analysis as a journey was critical in the president's view. As she asserted, "Are we getting better and still learning? Yes. We just keep building on that" (Lines 197-198).

Collaboration. The final theme present in the interview results was that of collaboration. The president strongly believed that groups of people working together were always more effective than individuals could be, especially when this principle was applied to the institution as a whole. She commented:

> And I think improvements happen with a team approach. And when you get individuals working on their own things, well, they may have something great for their class, but that has such a tiny effect on the college unless it spreads. And it doesn't spread if you don't have collaboration (Lines 125-129).

She further asserted:

> [What] I think is absolutely critical, is having a collaborative team approach, because individuals do not, but themselves, improve institutions. It's that collaborative effort that improves institutions. And so it's those processes that you go through with other people, whether it's a team of English faculty looking at what their doing, or some cross-functional team looking at how we're doing with service learning (Lines 98-105).

For the interviewee, processes were key to creating long-lasting change at the college, and those processes had to be built on collaboration and teamwork. Increasing student success meant involving people, for as the president concluded, "if you bring [people] together around a strong vision of something, they will work together effectively to achieve that vision, even if they don't like each other very well" (Lines 180-182).

College Two: Comparison of President Interview Themes to Focus Group Affinities

In comparing the themes that emerged in the president's interview and the affinities that were developed in the four focus groups at the college, three themes overlapped with affinity groups. First, institutional planning was a central component of the perceptions of the focus group participants as well as the president. Like the Achieving the Dream Core Team focus group participants, the president saw institutional planning as an outgrowth of the college's values and vision statement and as a driver of how gaps in student performance at the institution were addressed. In contrast, the Achieving the Dream Participants group saw institutional planning as reactionary in nature, growing out of the college's efforts to respond to data collected by various initiatives across the institution. The president's understanding of the impact of institutional planning also related to the focus groups' *Institutional Values/Goals* affinity. Again, the participants in the Achieving the Dream Core Team group shared similar perceptions with the president in how institutional values underpinned the use of data. And again, another constituency group—this time the participants in the staff focus group—saw the institution's values and goals as the output of institutional data collection and analysis.

Second, both focus group participants and the college president discussed the importance of communicating data across the institution. Focus group participants noted recent strains in communication pathways between different administrators, faculty, and staff, and commented on the difficulty of communicating data in a way that efficient and comprehensive. The president, on the other hand, perceived communication efforts as being linked to the college's ability to capture and share internally the results of programmatic efforts in order to increase awareness of and reflection on the success of

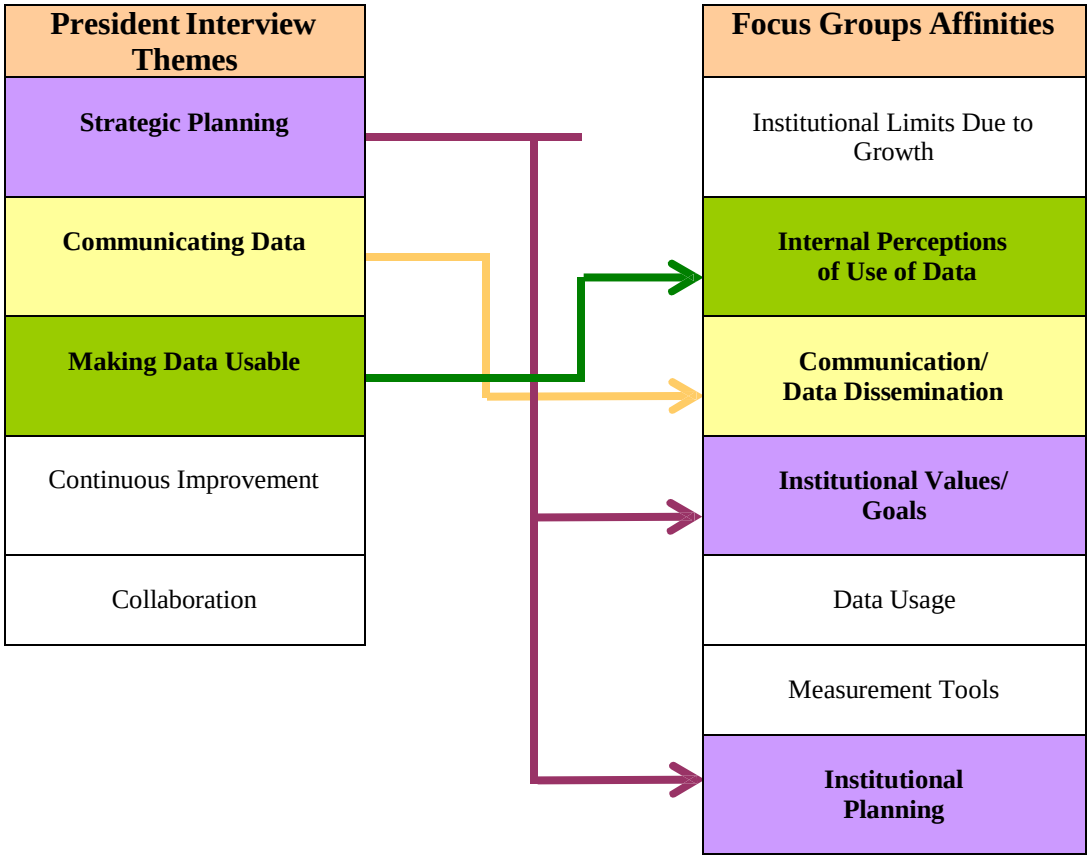
the college's students. The president noted that communication at the college needed to be built upon collaboration, though some focus group participants felt there was little discussion of data at the college, with the emphasis of data communication being placed on data dissemination.

Third, both focus group participants and the president addressed existing perceptions of data at the college as impacting the development of a data-driven culture. The focus group participants noted many negative perceptions of data usage at the institution, perceptions the college president also mentioned. Both groups felt that many employees were uncomfortable with the collection and analysis of data. While the focus groups framed internal perceptions as a key category in implementing change, though, the president addressed internal perceptions as part of an effort to make data more usable for all constituents, framing employee perceptions in a more positive, adaptive way. The president also agreed with the Achieving the Dream Core Team and college staff participants, who saw internal perceptions as being directly influenced by the processes developed to use data. The president specifically noted that employee perceptions could be influenced positively by making data processes simpler and more meaningful to their daily work.

As with the comparisons between president and focus group findings at College One, it is interesting to note some of the affinities that were not shared between the results from College Two's president interview and the focus groups. Most notable was the difference in global perspective between the president's comments and the discussions had by focus group participants. In her responses, the president tended to focus on issues that impacted the entire institution over time. She specifically noted on many occasions that the college's efforts to develop a data-driven culture required a

longer period of time and constituted "a journey." The focus group participants tended to focus on details and components of institutional processes, such as specific measurement tools and specific institutional decisions and processes. Interestingly, not one focus group framed the college's efforts within a longer period of time; instead, they concentrated on current struggles, especially as it related to limitations linked to institutional growth.

Figure 4.20: Shared Themes in College Two President Interview and Focus Group Results



College One and College Two: Focus Group Comparisons

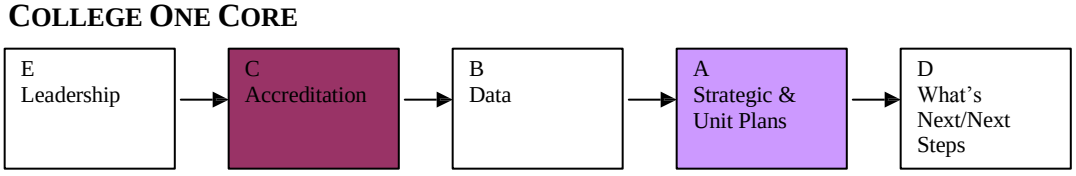
After the data had been collected from both participating colleges and compared internally, the data were then compared across colleges to see how similar or different focus group affinities and president interview themes were. Like-constituent groups were

first compared to each other, and then the aggregated results from each institution were compared.

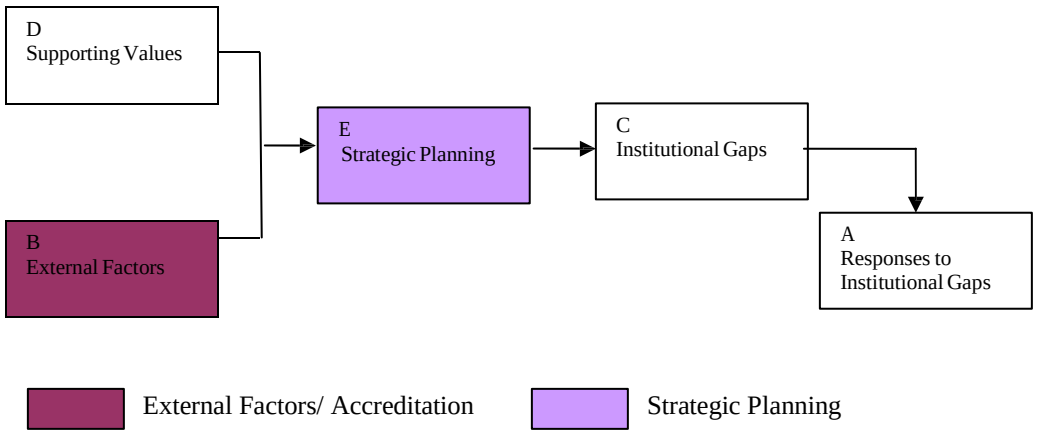
Achieving the Dream Core Team Focus Group Comparisons

While both Achieving the Dream Core Team focus groups categorized their perceptions of their institution's development of a "culture of evidence" into five categories, only two categories across institutions. First, both groups noted external factors—specifically the accreditation process—as having a direct influence on each college's use of data and planning efforts. The group from College Two identified the accreditation process as a primary driver of their use of data, and the College One's group saw accreditation as being second only to the college 's leadership in influence over data processes. Second, both colleges noted the role of strategic planning in their efforts to develop data-driven environments. In both instances, strategic planning was seen as a "middle step" in the "culture of evidence" process, being impacted by external factors and internal leadership and values and impacting how data are used and perceived. In both cases, the Achieving the Dream Core Team groups perceived the relationships between affinity groups as primarily linear in nature and well-defined.

Figure 4.21: Comparison Between College One's and College Two's Achieving the Dream Core Team Focus Group Affinities



COLLEGE TWO CORE



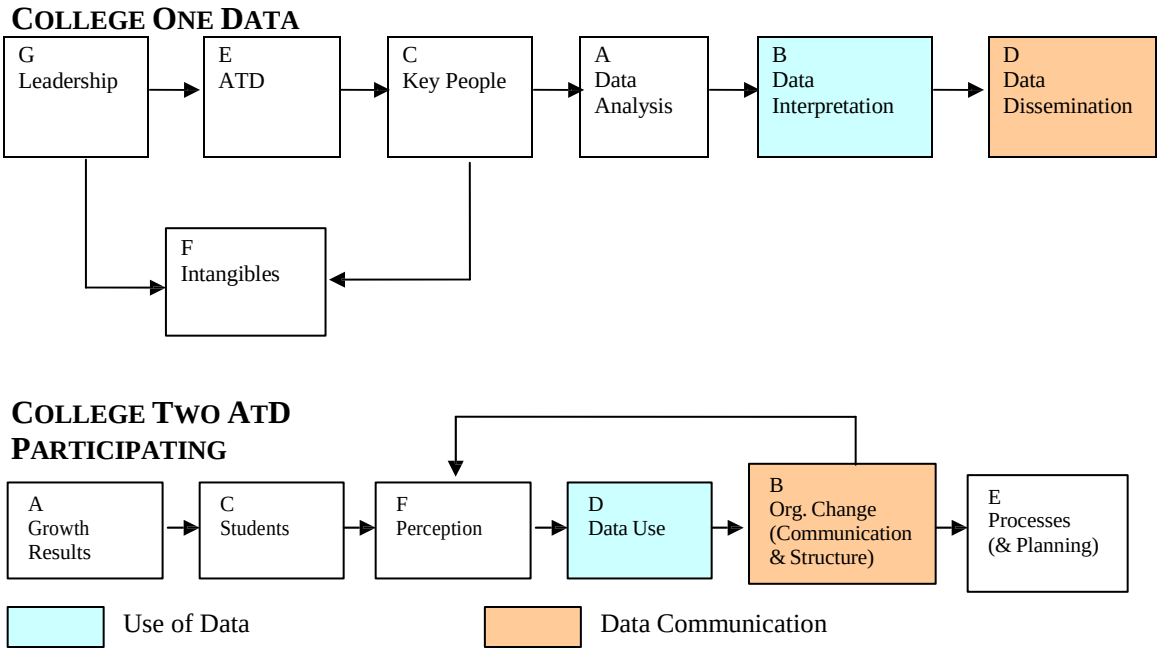
Achieving the Dream Core Team/Achieving the Dream Participants Focus Group Comparisons

Both colleges did not have similar "Achieving the Dream" Data Team groups, as the Data Team at College Two had been merged into the Core Team as one unit. College Two's Achieving the Dream Core Team focus group participants included the college's main institutional research staff, and so the researcher initially compared College Two's Core Team focus group affinities with College One's Data Team affinity groups. However, no affinities were commonly shared between these groups. When the results from College One's Data Team focus group were compared to the results from College Two's Achieving the Dream participants focus group, similarities were found. Thus, the comparison between these two latter groups was captured in the research study.

Two affinity groups appeared in the responses of both College One's Achieving the Dream Data Team group and College Two's Achieving the Dream participant group. Both groups noted the use of data as a significant category in the development of a data-driven culture. While the College One Data Team group noted multiple steps in the use of

data, only the interpretation and implementation phase of data overlapped responses from both groups. In both cases, data usage was also seen as directly driving the second common affinity: data communication. Although how data communication was defined by each group differed slightly, both emphasized internal communication over external. The two groups' relational figures were also somewhat linear in nature but distinctly less linear than those presented each college's Core Team groups.

Figure 4:22: Comparison Between College One's and College Two's Achieving the Dream Data Team/ Participants Focus Group Affinities



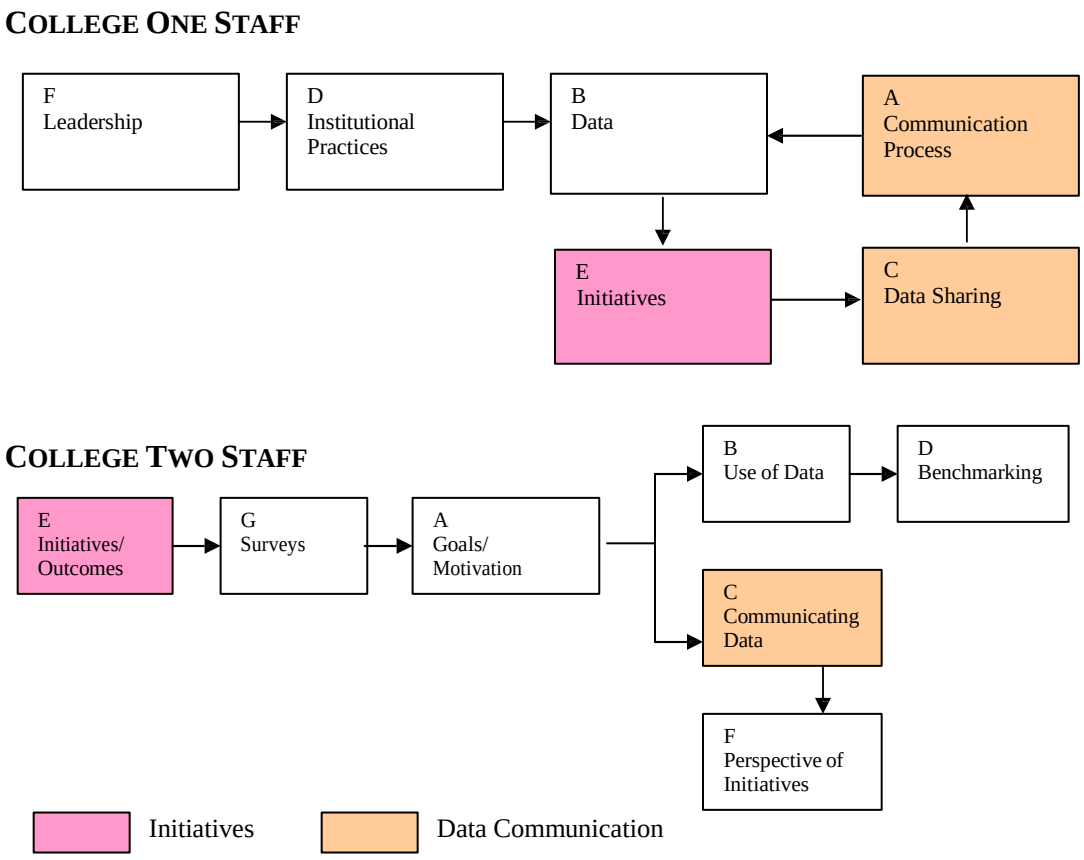
Staff Focus Group Comparisons

As with the other between-college focus group comparisons, two affinity categories were identified in the results of both staff focus groups at College One and College Two. The first shared affinity was that of initiatives in which the colleges were involved. Both groups mentioned the Achieving the Dream initiative and some of its core measurement variables, including successful student completion of gatekeeper courses

and developmental course series. Each college also mentioned the names of additional organizations and initiatives in which they were involved, underscoring each college's involvement in multiple activities, each with their own distinct foci. How the groups perceived initiatives influenced the work of the college, though, was very different: the staff group from College Two saw initiatives to be the primary driver of all data usage at the institution, while the College One staff group viewed initiatives as driving how data were shared but the initiatives were ultimately driven by the data.

Both groups also identified the communication of data as a distinct category in developing data-driven environments, and different aspects of communication were captured in two affinity groups in the staff group's results from College One. While the College One staff group discussed both the responsibility of individuals and the institution to access and communicate data, the College Two staff group only mentioned the institution's responsibility to disseminate data and involve constituents in the process. Both groups perceived that different levels of employees received differing amounts of data, though, with administrators receiving the most and staff receiving the least. The two staff groups also held similar perceptions that communication was more of an outcome than a driver of the college's efforts to be data-driven.

Figure 4.23: Comparison Between College One's and College Two's Staff Focus Group Affinities

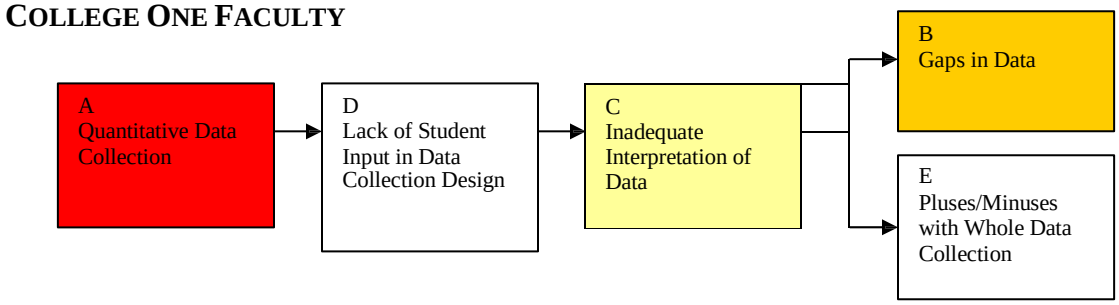


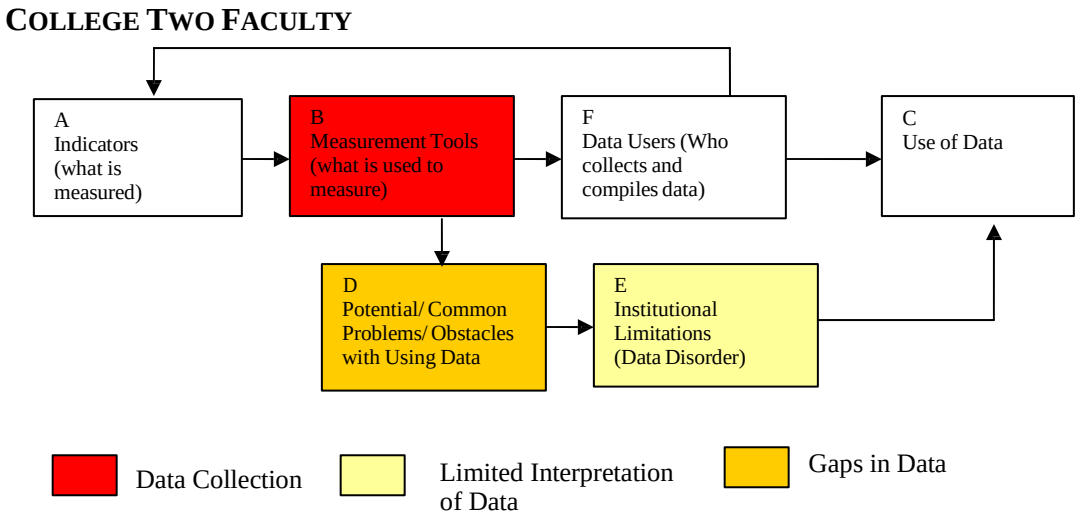
Faculty Focus Group Comparisons

Three affinity groups appeared in the results of both faculty focus groups: data collection, limited data interpretation/implementation, and gaps in data. Both colleges listed survey instruments as key in the collection of data, such as the Community College Survey of Student Engagement *(CCSSE)*. However, the faculty group from College One also noted the need to link data collection to data dissemination and that data collection at the college had been developed into cyclical processes. College Two faculty, on the other hand, focused exclusively on student survey instruments and external data resources. As for data interpretation and implementation, faculty at College One questioned the

perceived lack of faculty involvement in the interpretation of data and their subsequent implications on practices at the college. Faculty at College Two noted a perceived lack of institutional focus in the implementation of decisions based on data but didn't emphasize their role in this process. Instead, this group asserted working with data was just "doing one more damn thing" on top of an overloaded workload. Finally, both faculty focus groups denoted the presence of gaps in the data collected by each institution. For example, both groups mentioned problems with data being either too vague or too specific, with generic survey instruments in general failing to capture pieces of data of most interest to the college, such as the development of critical thinking skills. One of the colleges also mentioned the concern that the college was trying to "fix" student barriers that were "out of [their] control." This group also mentioned a lack of input from adjunct faculty regarding the use of student performance data.

Figure 4.24: Comparison Between College One's and College Two's Faculty Focus Group Affinities





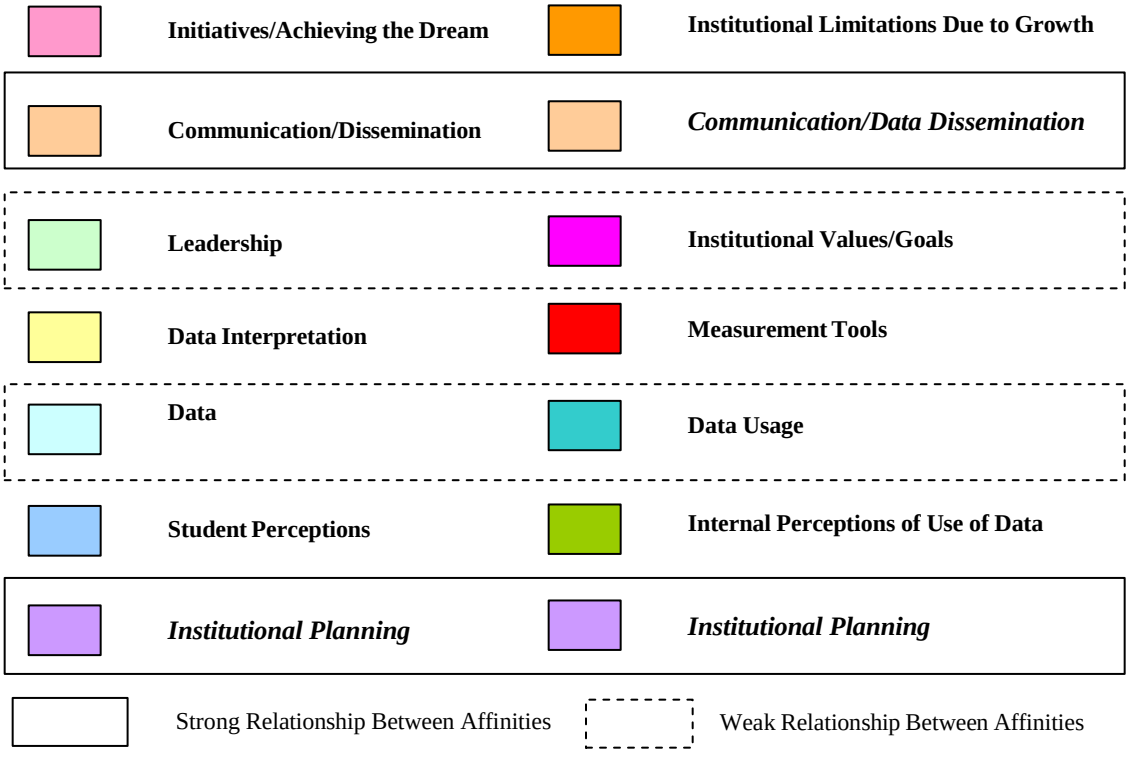
Comparison of Compiled Institutional Focus Group Results

In addition to comparing the results of the focus groups across colleges by like-constituent groups, the overall themes that emerged at each institution were also compared. The researcher discovered two strong relationships between institutional themes and two weak relationships between themes developed at each college. The first strong relationship was the emphasis placed on communication. At each institution, focus group participants expressed the need to make the dissemination and discussion of data an institutional priority. The second strong relationship between college themes was that of institutional planning. Constituents from both institutions saw that the colleges' efforts to plan were directly linked to the extent to which a data-driven environment existed.

Two weaker relationships also existed between the themes at each institution. First, both colleges mentioned institutional vision as being significant in the development of a "culture of evidence," though each college described the source of that vision differently. College One constituents specifically mentioned the importance of key people at the institution, such as the president, in creating and maintaining institutional vision. College Two, on the other hand, spoke instead of shared values and goals at the

institution that set the tone for data-driven changes. Second, both colleges mentioned the data or their use as a main theme, though the emphasis was different at each college. College One participants were much more interested in the types of data collected and were more interested in the instruments used to collect that data. College Two participants, however, were more interested in how gathered data were being used and less interested in where the data came from.

Figure 4.25: Comparison Between College One's and College Two's Compiled Institutional Affinities



Comparison of Results from College President Interviews

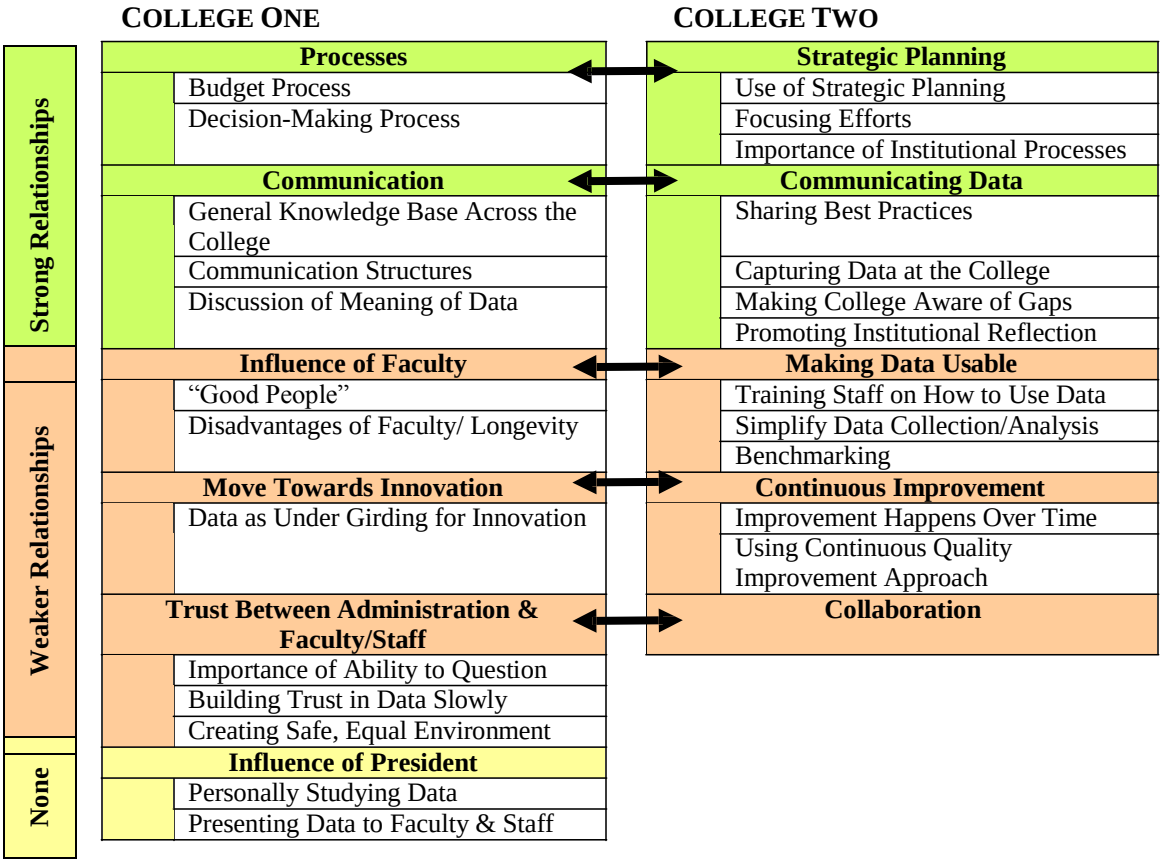
The themes that emerged in interviews with each of the college presidents were also compared and contrasted in reviewing the collected data. While many of the themes

from College One's president's comments shared general similarities with the themes mentioned by College Two's president, two strong relationships stood out in the findings. First, both presidents mentioned the importance of communicating and disseminating data. College One's president mentioned the critical nature of building a general knowledge base across the college, specifically by implementing an internal communication structure in the form of committees. The president also emphasized the significance of holding discussions around the meaning of data and what questions they answer. College Two's president also spoke of the creation of a college-wide general knowledge base, underscoring the need to capture and share internal best practices, make college constituents aware of gaps in student performance, and promote institutional reflection. In addition, a similar need to have broad discussions regarding the meaning and use of data arose in the College Two's president responses under the theme of making data usable.

Second, both college presidents discussed the importance of institutional planning in creating a "culture of evidence." This was manifested in the remarks of College One's president as she spoke about processes at the core of data-driven change, such as budget and decision-making processes. In her explanation, these processes had been developed to specifically tie institutional data the college's core functions. While the president from College Two identified important institutional processes as well, she also discussed at length the role of the college's strategic planning process and its development over time. A critical component of the planning process identified by the president was the continual effort to focus the college's plans and goals in a way that would allow the college to effectively enact strategic change.

Other weaker relationships appeared in the responses of the presidents, as well. Both presidents mentioned a need to establish trust, either through creating safe environments at College One or encouraging collaboration at College Two. Both presidents also mentioned the involvement of college constituents in the process, College One focusing on faculty and College Two on its entire staff. While both presidents mentioned innovation, the president from College One perceived innovation to be the next step the college would take—a much different view than that of the president from College Two, who saw innovation at the institution as part of a continuous improvement process. And only the president from College One felt that the role of the president was a main contributing factor to the college's implementation of a data-driven environment.

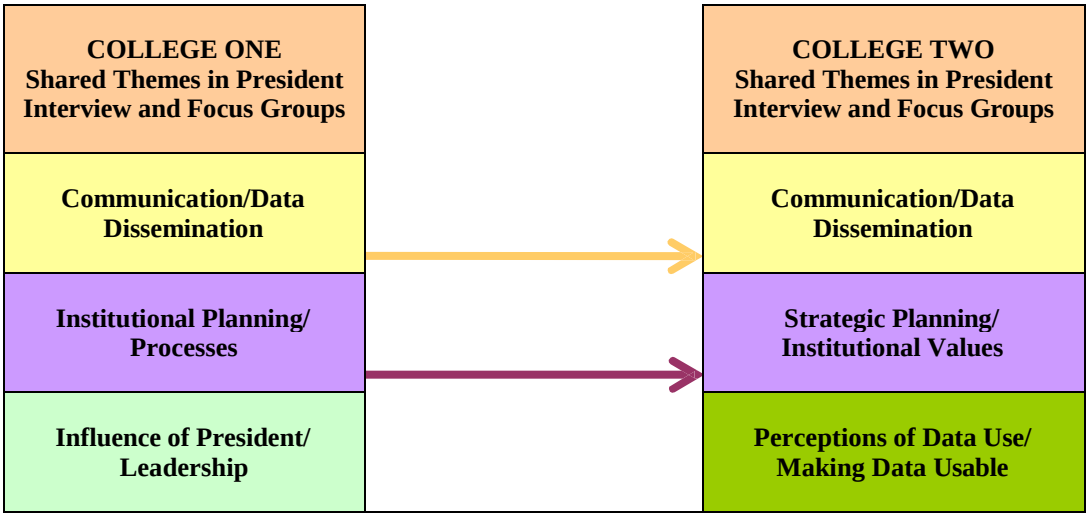
Figure 4.26: Comparison of Results from College Presidents' Interviews



Comparison of Shared Themes in Focus Groups and President Interview at Colleges

Finally, when the results from both colleges' focus groups and president interview were compared, two strong relationships and one weak relationship emerged between the themes from College One and College Two. The strong relationships shared by focus groups and president responses at both colleges were related to a perceived need for the communication and dissemination of data across the college and externally and the importance of institutional planning, processes, and values. The weak relationship existed between College One's participants' emphasis of the influence of leadership (specifically the president) and College Two's participants' perceptions of data usage. Both themes highlight a level of power over the development of a "culture of evidence" existing in the human capital of an organization: at College One, this power was seen to be encapsulated at the president's level, while at College Two this power was perceived to be spread across a larger constituency base.

Figure 4.27: Comparison of Shared Themes in Focus Groups and President Interview Themes from Both Colleges



INSTITUTIONAL SURVEY RESULTS

As mentioned above, the college presidents and all focus group participants completed the "culture of evidence" section of the *Community College Inventory* during the process of data collection at each institution. In all cases, this eight-item survey was administered at the beginning of the sessions in order to capture individual perceptions of the institutions' progress in developing a data-driven environment before group discussions occurred. In addition, frontloading the focus groups and interviews with the survey instrument provided a framework and common definitions for discussions held in the rest of the session.

Each question on the survey was linked to a five-point Likert response scale: 0=*No implementation*, or there is no evidence that this practice has been implemented in the institution; 1=*Under discussion*, or this practice is being discussed or is in the planning stages; 2=*Marginal implementation*, or there are isolated examples of this practice in the institution; 3=*Partial implementation*, or this practice is being implemented in some areas of the institution in a visible and substantial way; and 4=*Full implementation*, or this practice has been fully implemented across the institution. When participants were unsure of the most appropriate response to an item, they were asked to guess as best as possible or leave the item blank. Items that were left blank were considered "I don't know" responses and were tallied as such. Completed surveys were collected from all 48 focus group participants and each of the college presidents, adding up to 50 completed surveys in total. The responses were tabulated in a spreadsheet that compared group responses for each point on the Likert scale and then summarized the total responses for each item. An average score between 0 and 4 was also calculated for each item, with "4" indicating a unanimous belief that the institutional characteristic

described by the item was fully implemented at the institution and "0" indicating a unanimous belief that no evidence existed showing the institutional characteristic described by the item had been implemented to any extent at the institution. The results were reviewed to find where greater positive or negative consensus existed about an item as well as where difference existed in the responses of different groups on the same item.

College One Focus Group Survey Results

There were a total of 22 people in the focus groups held at College One, and all 22 participants completed the "culture of evidence" survey. In addition to a compilation of their responses, an average response score for all responses was calculated and included.

Table 4.27: College One Focus Group Participants' Responses to "Culture of Evidence" Survey

	0				*1*				*2*				*3*				*4*				*don't know*			
	C	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	0	0	0	0	0	0	0	0	0	0	2	2	4	3	2	2	1	1	3	2	0	0	0	0

Total	**0**	**1**	**2**	**3**	**4**	**?**	**Average**	**3.14**
	0	*0*	*4*	*11*	*7*	*0*		

(C=Achieving the Dream Core Team, D=Achieving the Dream Data Team, S=Staff not involved in Achieving the Dream, F=Faculty not involved in Achieving the Dream)

		0				1				2				3				4				don't know			
		C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	0	0	0	0	0	1	0	0	0	0	3	2	3	1	2	3	2	2	2	1	0	0	0	0
	b. Student Learning	0	0	0	0	0	1	0	0	0	1	3	1	3	1	3	3	2	1	1	2	0	0	0	0
	c. Student Attainment	0	0	0	0	0	1	0	0	0	0	2	0	2	1	3	4	3	2	2	2	0	0	0	0

Total	0	1	2	3	4	?
a. Student Persistence	0	1	5	9	7	0
b. Student Learning	0	1	5	10	6	0
c. Student Attainment	0	1	2	10	9	0

Average	3.06
a. Student Persistence	3.00
b. Student Learning	2.95
c. Student Attainment	3.23

	0				1				2				3				4				don't know			
	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	0	0	0	0	0	1	1	0	0	1	2	2	1	0	2	2	4	2	2	2	0	0	0	0

Total	0	1	2	3	4	?
	0	2	5	5	10	0

Average	3.05

		0				1				2				3				4				don't know			
		C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	0	0	0	0	0	0	0	0	0	0	1	0	0	3	3	3	5	1	3	3	0	0	0	0
	b. Dev to College Courses	0	0	0	0	0	0	0	0	0	0	2	1	1	2	3	3	4	2	2	2	0	0	0	0
	c. Complete Gatekeeper Courses	0	0	0	0	0	0	0	0	0	0	3	1	0	2	3	3	5	2	1	2	0	0	0	0
	d. Complete Courses with C or Better	0	0	0	0	0	0	0	0	0	0	2	1	0	1	3	1	5	3	2	4	0	0	0	0
	e. Term to Term Persistence	0	0	1	0	0	0	0	0	0	0	2	1	0	1	4	2	5	3	0	3	0	0	0	0
	f. Complete Degree or Certificate	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3	5	3	3	3	0	0	0	0

Total	0	1	2	3	4	?
a. Successful completion of remedial/ developmental courses	0	0	1	9	12	0
b. Developmental students' success in entry-level college courses	0	0	3	9	10	0

Average	3.43
a. Complete Dev Courses	3.56
b. Dev to College Courses	3.32

c. Successful completion of selected gatekeeper courses	*0*	*0*	*4*	*8*	*10*	*0*	c. Complete Gatekeepers	3.27
d. Rate of successful course completion for all courses (C or better)	*0*	*0*	*3*	*5*	*14*	*0*	d. Complete Courses C or +	3.56
e. Student persistence—re-enrollment from one term to the next	*1*	*0*	*3*	*7*	*11*	*0*	e. Term to Term Persistence	3.23
f. Completion of certificates and associate degrees	*0*	*0*	*0*	*8*	*14*	*0*	f. Certificate or Degree	3.64

		0				***1***				***2***				***3***				***4***				***don't know***			
		C	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	0	0	0	0	0	0	0	0	0	1	0	1	1	1	3	2	4	2	4	3	0	0	0	0
	b. Race/ Ethnicity	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	4	3	5	3	0	0	0	0
	c. Income Level	0	0	0	0	0	0	1	0	0	2	1	2	1	2	2	2	4	0	3	1	0	0	0	1

Total	**0**	**1**	**2**	**3**	**4**	**?**	**Average**	**3.38**
a. Gender	*0*	*0*	*2*	*7*	*13*	*0*	a. Gender	3.56
b. Race/Ethnicity	*0*	*0*	*0*	*7*	*15*	*0*	b. Race/Ethnicity	3.68
c. Income Level	*0*	*1*	*5*	*7*	*8*	*1*	c. Income Level	2.91

	0				***1***				***2***				***3***				***4***				***don't know***			
	C	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	0	0	0	0	0	0	0	0	0	1	4	2	2	1	2	2	3	2	1	1	0	0	0	1

Total	**0**	**1**	**2**	**3**	**4**	**?**	**Average**	**2.86**
	0	*0*	*7*	*7*	*7*	*1*		

(C=Achieving the Dream Core Team, D=Achieving the Dream Data Team, S=Staff not involved in Achieving the Dream, F=Faculty not involved in Achieving the Dream)

		0				1				2				3				4				don't know			
		C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	0	0	0	0	0	0	1	0	0	0	3	1	1	1	2	0	4	2	2	5	0	0	0	0
	b. Resource Allocation	0	0	0	0	0	0	1	0	1	0	3	2	0	1	3	1	4	2	1	2	0	0	0	0
	c. Faculty/ Staff Development	0	0	0	1	0	0	1	2	0	0	2	2	3	2	3	1	2	1	0	1	0	0	0	0
	d. Improvement Programs	0	0	0	0	0	0	0	2	0	1	1	1	2	1	4	3	3	2	0	2	0	0	0	0

Total	0	1	2	3	4	?
a. Strategic Priorities	*0*	*1*	*4*	*4*	*13*	*0*
b. Resource Allocations	*0*	*2*	*6*	*5*	*9*	*0*
c. Faculty and Staff Development	*1*	*4*	*4*	*9*	*4*	*0*
d. Improvement Programs and Services for Learners	*0*	*2*	*3*	*10*	*7*	*0*

Average	2.96
a. Strategic Priorities	3.32
b. Resource Allocation	2.95
c. Faculty/Staff Development	2.56
d. Improvement Programs	3.00

	0				1				2				3				4				don't know			
	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	0	0	1	0	0	0	0	0	1	1	3	2	1	3	2	4	3	0	1	0	0	0	0	0

Total	0	1	2	3	4	?
	1	*0*	*7*	*10*	*4*	*0*

Average	2.73

(C=Achieving the Dream Core Team, D=Achieving the Dream Data Team, S=Staff not involved in Achieving the Dream, F=Faculty not involved in Achieving the Dream)

Differences in Responses Between Focus Groups

After the survey data from each focus group was compiled, responses of the four different focus groups were compared to see if there were any items where responses were highly varied. Three such occurrences were noted. There were two items on which a noticeable difference existed in how participants from the Achieving the Dream Core Team focus group and participants from the college's staff focus group responded to the same question. First, on survey item 4c, "The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper

courses," all Achieving the Dream Core Team focus group participants responded that that college had fully implemented this measure, producing an average score of 4.00. Responses from the participants in the staff focus group, on the other hand, produced an average score of 2.71, indicating a belief that implementation of this measure was less than partially complete at the college, meaning it wasn't fully implemented in even some areas of the institution "in a visible and substantial way." The second large difference in responses occurred on survey item 4d, on which the Achieving the Dream participants again unanimously reported that the use of data on the rate of successful course completion for all courses was fully implemented at the institution (average score=4.00). Again, the staff group's average score was much lower at 3.00, indicating the perception by these participants that the use of data on the rate of successful course completion had only been partially implemented at the college. In general, the responses of the Achieving the Dream Core Team participants were higher than those of the staff focus group participants; however, no other responses varied as much as the two noted above.

Table 4.28: Survey Items with Greatest Difference in Responses by College One Achieving the Dream Core Team Focus Group and College One Staff Focus Group

Survey Item	**COLLEGE ONE Core**	**COLLEGE ONE Staff**
4c. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper courses	4.00	2.71
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful course completion for all courses (C or better)	4.00	3.00

The only other large variance noted in the responses of different focus groups at College One existed between the Achieving the Dream Core Team and the Achieving the Dream Data Team participants on survey item 5c, "Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student

characteristics, including: Income level." Again, responses by the participants in the Core Team focus group were higher than those of all other focus groups, producing an average score of 3.80. The Data Team participants' average response score was much lower, at 2.50.

Table 4.29: Survey Items with Greatest Difference in Responses by College One Achieving the Dream Core Team Focus Group and College One Staff Focus Group

Survey Item	COLLEGE ONE Core	COLLEGE ONE Data
5c. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Income level	3.80	2.50

Highest and Lowest Rated Survey Items by All Focus Groups

After reviewing the average scores for all focus group participants on each item, the highest and lowest average scored survey items were noted. Five survey items received an average response score of 3.5 or more: items 4a, 4d, 4f, 5a, and 5b. Item 5b, "Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/Ethnicity," received the highest average score of 3.68, indicating that all focus group participants felt that the use of data on student race and ethnicity in depicting student persistence, learning, and attainment was the most fully implemented measure at the institution.

Table 4.30: Survey Items with Highest Average Response Score from College One Participants

Survey Item	Average
5b. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/ethnicity	3.68
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.64
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: successful completion of remedial/developmental courses	3.50
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful course completion for all courses (C or better)	3.50
5a. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Gender	3.50

On the other hand, four survey items received average response scores of 2.91 or less: survey items 5c, 6, 7c, and 8. Survey item 7c, "The results from student and institutional assessments are used routinely to inform institutional decisions regarding: Faculty and staff development," had the lowest average response score of 2.50, indicating that College One focus group participants perceived in general that the use of data to inform faculty and staff development was the least implemented area at the college. Interestingly, item 5c on the use of income level data scored in the bottom five average responses, despite the fact that the Achieving the Dream Core Team participants' average score was 3.80. While the faculty and staff focus group participants produced average scores for the item around the 3.00 mark, much of the lowness of the overall average score was due to the Achieving the Dream Data Team's low score of 2.50.

Table 4.31: Survey Items with Lowest Average Response Score from College One Participants

Survey Item	Average
7c. The results from student and institutional assessments are used routinely to inform institutional decisions regarding: Faculty and staff development	2.50
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	2.73
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	2.85
5c. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Income level	2.91

College Two Focus Group Survey Results

A total of 25 people in the focus groups held at College One—every participant in all four focus groups—completed the "culture of evidence" survey. These responses were compiled, and an overall average response score was calculated. The results are listed below.

Table 4.32: College Two Focus Group Participants' Responses to "Culture of Evidence" Survey.

	0				*1*				*2*				*3*				*4*				*don't know*			
	C	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	0	0	0	0	0	0	0	0	0	0	0	2	3	5	7	6	0	0	0	0	0	0	0	2

Total	**0**	**1**	**2**	**3**	**4**	**?**		**Average**	**2.68**
	0	*0*	*2*	*21*	*0*	*2*			

(C=Achieving the Dream Core Team, D=Achieving the Dream Data Team, S=Staff not involved in Achieving the Dream, F=Faculty not involved in Achieving the Dream)

		0				1				2				3				4				don't know			
		C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	0	0	0	0	0	0	0	1	0	0	0	0	1	5	2	5	2	0	5	2	0	0	0	2
	b. Student Learning	0	0	0	0	0	0	0	1	0	0	0	0	0	5	1	5	3	0	6	2	0	0	0	2
	c. Student Attainment	0	0	0	0	0	0	0	1	1	0	0	0	1	4	3	4	1	1	4	3	0	0	0	2

Total	0	1	2	3	4	?
a. Student Persistence	0	1	0	13	9	2
b. Student Learning	0	1	0	11	11	2
c. Student Attainment	0	1	1	12	9	2

Average	3.05
a. Student Persistence	3.04
b. Student Learning	3.12
c. Student Attainment	3.00

	0				1				2				3				4				don't know			
	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	0	0	0	0	0	1	0	0	1	1	1	3	2	2	2	3	0	1	4	2	0	0	0	2

Total	0	1	2	3	4	?
	0	1	6	9	7	2

Average	2.72

		0				1				2				3				4				don't know			
		C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	1	2	4	4	7	0	0	0	2
	b. Dev to College Courses	0	0	0	0	0	0	0	0	0	0	0	1	2	2	3	3	1	3	4	4	0	0	0	2
	c. Complete Gatekeeper Courses	0	0	0	0	0	0	0	0	2	0	0	0	0	3	3	3	1	2	4	5	0	0	0	2
	d. Complete Courses with C or Better	0	0	0	0	0	0	0	0	0	0	1	0	1	2	3	4	2	3	3	4	0	0	0	2
	e. Term to Term Persistence	0	0	1	0	0	0	0	0	0	0	2	1	1	2	3	3	2	3	1	4	0	0	0	2
	f. Complete Degree or Certificate	0	0	0	0	0	0	0	0	1	0	0	0	1	1	4	4	1	4	3	4	0	0	0	2

Total	0	1	2	3	4	?
a. Successful completion of remedial/ developmental courses	0	0	0	6	17	2
b. Developmental students success in entry-level college courses	0	0	1	10	12	2

Average	3.19
a. Complete Dev Courses	3.44
b. Dev to College Courses	3.20

c. Successful completion of selected gatekeeper courses	*0*	*0*	*2*	*9*	*12*	*2*
d. Rate of successful course completion for all courses (C or better)	*0*	*0*	*1*	*10*	*12*	*2*
e. Student persistence—re-enrollment from one term to the next	*1*	*0*	*3*	*9*	*10*	*2*
f. Completion of certificates and associate degrees	*0*	*0*	*1*	*10*	*12*	*2*

c. Complete Gatekeepers	3.16
d. Complete Courses C or +	3.20
e. Term to Term Persistence	2.92
f. Certificate or Degree	3.20

		0				***1***				***2***				***3***				***4***				***don't know***			
		C	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	0	0	0	0	0	0	0	1	1	0	0	3	2	2	3	1	0	3	4	3	0	0	0	2
	b. Race/ Ethnicity	0	0	0	0	0	0	0	1	1	0	0	0	2	2	4	2	0	3	3	5	0	0	0	2
	c. Income Level	0	1	0	1	0	0	0	1	2	1	1	3	1	1	5	2	0	2	1	0	0	0	0	3

Total	**0**	**1**	**2**	**3**	**4**	**?**
a. Gender	*0*	*1*	*4*	*8*	*10*	*2*
b. Race/Ethnicity	*0*	*1*	*1*	*10*	*11*	*2*
c. Income Level	*2*	*1*	*7*	*9*	*3*	*3*

Average	**2.72**
a. Gender	2.92
b. Race/Ethnicity	3.08
c. Income Level	2.16

	0				***1***				***2***				***3***				***4***				***don't know***			
	C	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**	**C**	**D**	**S**	**F**
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	0	0	0	0	0	0	0	0	2	0	0	1	0	4	3	5	1	1	4	2	0	0	0	2

Total	**0**	**1**	**2**	**3**	**4**	**?**
	0	*0*	*3*	*12*	*8*	*2*

Average	**2.96**

(C=Achieving the Dream Core Team, D=Achieving the Dream Data Team, S=Staff not involved in Achieving the Dream, F=Faculty not involved in Achieving the Dream; ?= "Don't Know" Response)

		0				1				2				3				4				don't know			
		C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	0	0	0	0	0	0	0	0	0	0	0	2	1	2	2	4	2	3	5	1	0	0	0	3
	b. Resource Allocation	0	0	0	0	0	0	0	1	0	0	2	2	2	2	3	4	1	3	2	0	0	0	0	3
	c. Faculty/ Staff Development	0	0	0	0	0	1	0	0	0	0	1	3	2	1	3	4	1	3	3	0	0	0	0	3
	d. Improvement Programs	0	0	0	0	0	0	0	0	0	0	3	2	2	2	0	4	1	3	4	1	0	0	0	3

Total	**0**	**1**	**2**	**3**	**4**	**?**
a. Strategic Priorities	*0*	*0*	*2*	*9*	*11*	*3*
b. Resource Allocations	*0*	*1*	*4*	*11*	*6*	*3*
c. Faculty and Staff Development	*0*	*1*	*4*	*10*	*7*	*3*
d. Improvement Programs and Services for Learners	*0*	*0*	*5*	*8*	*9*	*3*

Average	**2.78**
a. Strategic Priorities	3.00
b. Resource Allocation	2.64
c. Faculty/Staff Development	2.68
d. Improvement Programs	2.80

	0				1				2				3				4				don't know			
	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F	C	D	S	F
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	0	0	0	0	0	0	0	0	2	1	2	3	1	3	3	3	0	1	2	1	0	0	0	3

Total	**0**	**1**	**2**	**3**	**4**	**?**
	0	*0*	*8*	*10*	*4*	*3*

Average	**2.48**

(C=Achieving the Dream Core Team, D=Achieving the Dream Data Team, S=Staff not involved in Achieving the Dream, F=Faculty not involved in Achieving the Dream; ?= "Don't Know" Response)

Differences in Responses Between Focus Groups

As with the results from the focus groups at College One, responses of the four different focus groups held at College Two were compared to see if there were any items where responses were highly varied. Again, three such occurrences were noted. Two of the items on which a noticeable difference existed in responses involved all four groups, and one involved a difference between the responses of staff and faculty. The first survey item was the same as with College One: 4c, or "The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected

gatekeeper courses." The participants in the Achieving the Dream Core Team focus group perceived the extent to which this measure was implemented at the college to be much lower than all of the other three groups, producing an average response score of 2.67 as compared to the Achieving the Dream Participants, Staff, and Faculty average scores of 3.40, 3.57, and 3.63 respectively. On the other hand, the Achieving the Dream Core Team focus group rated the implementation of survey item 2b, "The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding: Student learning," much higher, unanimously scoring the item at a 4.00 level, or full implementation. Responses from the participants in the staff focus group were similarly high, at 3.86, but both the Achieving the Dream Participants and faculty groups identified the use of data on student learning as being partially implemented at the college (average score: 3.00) but not fully.

Table 4.33: Survey Items with Greatest Difference in Responses by College Two Achieving the Dream Core Team Focus Group and All Other College Two Focus Groups

Survey Item	**COLLEGE TWO Core**	**COLLEGE TWO Participating**	**COLLEGE TWO Staff**	**COLLEGE TWO Faculty**
4c. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper courses	2.67	3.40	3.57	3.63
2b. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding: Student learning	4.00	3.00	3.86	3.00

The third variance noted in the responses of different focus groups at College Two arose between the faculty and staff participants on survey item 7a, "The results from student and institutional assessments are used routinely to inform institutional decisions

regarding: Strategic Priorities." The staff group produced an average score of 3.71 for this item, while the faculty group rated it at 2.86. This means that while the staff group perceived that the use of data to inform strategic priorities was almost fully implemented at the college, the faculty group didn't even perceive that limited areas of the college had effectively based strategic priorities on data for student and institutional assessment.

Table 4.34: Survey Items with Greatest Difference in Responses by College Two Faculty Focus Group and Staff Focus Group

Survey Item	COLLEGE TWO Staff	COLLEGE TWO Faculty
7a. The results from student and institutional assessments are used routinely to inform institutional decisions regarding: Strategic Priorities	3.71	2.86

Highest and Lowest Rated Survey Items by All Focus Groups

Again, after reviewing the average scores for all focus group participants on each item, the highest and lowest average scored survey items were noted. Only four survey items received an average response score of 3.2 or more: items 4a, 4d, 4d, and 4f. Item 4a, "The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses," was the only item at 3.44 to receive average score higher than 3.20. This indicates that all focus group participants saw the institution as having made the most progress in becoming data-driven in the area of developmental coursework. The other three survey items all scored at 3.20.

Table 4.35: Survey Items with Highest Average Response Score from College Two Participants

Survey Item	Average
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	3.44
4b. The institution regularly collects, analyzes, and reports data pertaining to the following: Developmental students' success in entry-level college courses	3.20
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful course completion for all courses (C or better)	3.20
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.20

Five survey items received average response scores from all focus groups combined of 2.68 or less: survey items 1, 5c, 7b, 7c, and 8. Survey item 5c, "Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Income level," had the lowest average response score of 2.16, indicating that College Two focus group participants perceived in general that the data on student income levels was integrated into the decision making and planning processes at the college than all other areas included on the survey. None of the survey items on which large variances in responses between focus groups occurred appeared in the groups of highest or lowest average response scores.

Table 4.36: Survey Items with Lowest Average Response Score from College Two Participants

Survey Item	Average
5c. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Income level	2.16
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	2.48
7b. The results from student and institutional assessments are used routinely to inform institutional decisions regarding: Resource allocation	2.64
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	2.68
7c. The results from student and institutional assessments are used routinely to inform institutional decisions regarding: faculty and staff development	2.68

Comparison Between Both Colleges' Focus Group Survey Results

To follow the structure of the previous comparisons between data from the two participating community colleges in the study, the results from the "culture of evidence" survey from like employee groups at each college were compared. The average response scores of the Achieving the Dream Core Team focus groups and college staff and faculty focus groups compared to each other, and differences between average response scores of more than 0.90 were noted. Because similarities existed in the focus group affinity groups between College One's Achieving the Dream Data Team and College Two's Achieving the Dream participants group, these two groups were again compared against each other in looking at the survey results.

Comparison Between Core Team Focus Group Survey Results

Of all of the focus groups, the greatest number of average response scores differing between the colleges by 0.90 or more occurred between the responses of the two colleges' Achieving the Dream Core Team focus groups. The average response rates for eight survey items differed by more than 0.90 between the two Core Team groups, with the responses from College One's group always being higher than those of College Two's group. These items included questions 3, 4c, 4f, 5a, 5b, 5c, 6, and 8. The greatest variance in responses existed in regard to survey item 5c: the College One Core Team group had an average response score of 3.80, indicating a belief that their institution had almost fully implemented the use of student income level data into the decision making and planning processes of the college, while the College Two Core Team group had an average response score of 2.33, implying the perception that their institution had barely implemented the use of student income level data marginally across campus. On the other seven items where large variances occurred, the average response scores of College

One's Core Team group always indicated the perception that the item was considered well on the way to or at full implementation at the institution, while the average response scores of College Two's Core Team group consistently placed the implementation of the same item at their institution much lower.

Table 4.37: Comparison of Survey Results Between College One and College Two Core Team Focus Group Participants

		COLLEGE ONE CORE						COLLEGE TWO CORE					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.		0	0	0	4	1	0	0	0	0	3	0	0
Average		**3.20**						**3.00**					

		COLLEGE ONE CORE						COLLEGE TWO CORE					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	0	0	0	3	2	0	0	0	0	1	2	0
	b. Student Learning	0	0	0	3	2	0	0	0	0	0	3	0
	c. Student Attainment	0	0	0	2	3	0	0	0	1	1	1	0
Average													
a. Student Persistence		**3.40**						**3.67**					
b. Student Learning		**3.40**						**4.00**					
c. Student Attainment		**3.60**						**3.00**					

	COLLEGE ONE CORE						COLLEGE TWO CORE					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	0	0	0	1	4	0	0	0	1	2	0	0
Average	**3.80**						**2.67**					

		COLLEGE ONE CORE						COLLEGE TWO CORE					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	0	0	0	0	5	0	0	0	0	1	2	0
	b. Dev to College Courses	0	0	0	1	4	0	0	0	0	2	1	0
	c. Complete Gatekeeper Courses	0	0	0	0	5	0	0	0	2	0	1	0
	d. Complete Courses with C or Better	0	0	0	0	5	0	0	0	0	1	2	0
	e. Term to Term Persistence	0	0	0	0	5	0	0	0	0	1	2	0
	f. Complete Degree or Certificate	0	0	0	0	5	0	0	0	1	1	1	0
Average													
a. Successful completion of remedial/ developmental courses		**4.00**						**3.67**					
b. Developmental students' success in entry-level college courses		**3.80**						**3.33**					
c. Successful completion of selected gatekeeper courses		**4.00**						**2.67**					
d. Rate of successful course completion for all courses (C or better)		**4.00**						**3.67**					
e. Student persistence—re-enrollment from one term to the next		**4.00**						**3.67**					
f. Completion of certificates and associate degrees		**4.00**						**3.00**					

		COLLEGE ONE CORE						COLLEGE TWO CORE					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	0	0	0	1	4	0	0	0	1	2	0	0
	b. Race/Ethnicity	0	0	0	1	4	0	0	0	1	2	0	0
	c. Income Level	0	0	0	1	4	0	0	0	2	1	0	0
Average													
a. Gender		**3.80**						**2.67**					
b. Race/Ethnicity		**3.80**						**2.67**					
c. Income Level		**3.80**						**2.33**					

	COLLEGE ONE CORE						COLLEGE TWO CORE					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	0	0	0	2	3	0	0	0	2	0	1	0
Average	**3.60**						**2.67**					

		COLLEGE ONE CORE						COLLEGE TWO CORE					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	0	0	0	1	4	0	0	0	0	1	2	0
	b. Resource Allocation	0	0	1	0	4	0	0	0	0	2	1	0
	c. Faculty/Staff Development	0	0	0	3	2	0	0	0	0	3	0	0
	d. Improvement Programs	0	0	0	2	3	0	0	0	0	2	1	0
Average													
a. Strategic Priorities		**3.80**						**3.67**					
b. Resource Allocation		**3.60**						**3.33**					
c. Faculty & Staff Development		**3.40**						**3.00**					
d. Improvement Programs & Services for Learners		**3.60**						**3.33**					

	COLLEGE ONE CORE						COLLEGE TWO CORE					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	0	0	1	1	3	0	0	0	2	1	0	0
Average	**3.40**						**2.33**					

?="don't know;" scores in **red** note a difference in responses between both colleges of more than 0.90.

Furthermore, all but two of the average response scores of the College One Core Team group are higher than the average response scores of the College Two Core Team group. College Two's Core Team group scored higher in their responses to the implementation of the use of student persistence and learning data at their college; however, the difference between their response scores and the response scores of College One's Core Team group were 0.60 or less.

Comparison Between Data Team and Achieving the Dream Participants Focus Group Survey Results

As with the comparisons between the affinity groups developed in College One's Achieving the Dream Data Team focus group and College Two's Achieving the Dream participants focus group, strong similarities existed as well between the results of the "culture of evidence" survey from these two groups. In fact, there were no survey items on which a difference of more than 0.60 existed between the responses of these two groups. It is interesting that despite differences in the institutional cultures and the approaches taken at each institution in developing a "culture of evidence," these two groups of employees involved to some extent in the work of Achieving the Dream at their

college perceived very similar levels of implementation at their respective institution regarding the components of a data-driven culture.

Table 4.38: Comparison of Survey Results Between College One's Achieving the Dream Data Team and College Two's Achieving the Dream Participants Focus Groups

		COLLEGE ONE DATA						COLLEGE TWO Participating					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.		0	0	0	3	1	0	0	0	0	5	0	0
Average		**3.25**						**3.00**					
		COLLEGE ONE DATA						**COLLEGE TWO Participating**					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	0	1	0	1	2	0	0	0	0	5	0	0
	b. Student Learning	0	1	1	1	1	0	0	0	0	5	0	0
	c. Student Attainment	0	1	0	1	2	0	0	0	0	4	1	0
Average													
a. Student Persistence		**00**						**3.00**					
b. Student Learning		**2.50**						**3.00**					
c. Student Attainment		**3.00**						**3.20**					
		COLLEGE ONE DATA						**COLLEGE TWO Participating**					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.		0	1	1	0	2	0	0	1	1	2	1	0
Average		**2.75**						**2.60**					

		COLLEGE ONE DATA						COLLEGE TWO Participating					
		0	1	2	3	4	?	0	1	2	3	4	?
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	0	0	0	3	1	0	0	0	0	1	4	0
	b. Dev to College Courses	0	0	0	2	2	0	0	0	0	2	3	0
	c. Complete Gatekeeper Courses	0	0	0	2	2	0	0	0	0	3	2	0
	d. Complete Courses with C or Better	0	0	0	1	3	0	0	0	0	2	3	0
	e. Term to Term Persistence	0	0	0	1	3	0	0	0	0	2	3	0
	f. Complete Degree or Certificate	0	0	0	1	3	0	0	0	0	1	4	0
Average													
a. Successful completion of remedial/ developmental courses		**3.25**						**3.80**					
b. Developmental students' success in entry-level college courses		**3.50**						**3.60**					
c. Successful completion of selected gatekeeper courses		**3.50**						**3.40**					
d. Rate of successful course completion for all courses (C or better)		**3.75**						**3.60**					
e. Student persistence—re-enrollment from one term to the next		**3.75**						**3.60**					
f. Completion of certificates and associate degrees		**3.75**						**3.80**					

		COLLEGE ONE DATA						COLLEGE TWO Participating					
		0	1	2	3	4	?	0	1	2	3	4	?
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	0	0	1	1	2	0	0	0	0	2	3	0
	b. Race/Ethnicity	0	0	0	1	3	0	0	0	0	2	3	0
	c. Income Level	0	0	2	2	0	0	1	0	1	1	2	0
Average													
a. Gender		**3.25**						**3.60**					
b. Race/Ethnicity		**3.75**						**3.60**					
c. Income Level		**2.50**						**2.60**					

	COLLEGE ONE DATA						COLLEGE TWO Participating					
	0	1	2	3	4	?	0	1	2	3	4	?
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	0	0	1	1	2	0	0	0	0	4	1	0
Average	**3.25**						**3.80**					

		COLLEGE ONE DATA						COLLEGE TWO Participating					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	0	1	0	1	2	0	0	0	0	2	3	0
	b. Resource Allocation	0	1	0	1	2	0	0	0	0	2	3	0
	c. Faculty/Staff Development	0	1	0	2	1	0	0	1	0	1	3	0
	d. Improvement Programs	0	0	1	1	2	0	0	0	0	2	3	0
Average													
a. Strategic Priorities		**3.00**						**3.60**					
b. Resource Allocation		**3.00**						**3.60**					
c. Faculty & Staff Development		**2.75**						**3.20**					
d. Improvement Programs & Services for Learners		**3.25**						**3.60**					

	COLLEGE ONE DATA						COLLEGE TWO Participating					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	0	0	1	3	0	0	0	0	1	3	1	0
Average	**2.75**						**3.00**					

?=”don’t know;” scores in **red** note a difference in responses between both colleges of more than 0.90.

Comparison Between Colleges’ Staff Focus Group Survey Results

In comparing the responses to the “culture of evidence” survey of the participants from both of the staff focus groups, four items were identified on which a difference between the average response score of one group and that of the other staff group exceeded 0.90. This means there was much congruence in the perceptions of the staff at College One and their counterparts at College Two regarding the development of a data-driven culture at their respective institutions. Of those four items noted with greater variance in the responses between groups, items 2b, 6, 7c, and 7c, the average response score was always higher from the College Two staff group. The greatest variance in responses existed in regard to survey item 7d: the College One Core Team group had an average response score of 2.29, identifying a shared view that their institution had only

been marginally successful in linking student performance data to institutional improvement programs and services for learner. However, the College Two Core Team group had an average response score of 3.71, implying the perception that their institution had almost fully implemented the use of student data in informing what services would be provided to learners at the college and which improvement programs would be implemented. It is interesting to note that only two of the staff average response scores from the College One group—those related to the use of data to promote student learning, and the use of student demographic data on race and ethnicity—were higher than the average response scores of the College Two group, and neither was higher but much. This implies that in general the staff group at College One had less confidence in the presence of a data-driven environment at their institution than the staff group from College Two did.

Table 4.39: Comparison of Survey Results Between College One and College Two Staff Focus Group Participants

	COLLEGE ONE Staff						COLLEGE TWO Staff					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	0	0	2	2	3	0	0	0	0	7	0	0
Average	**3.14**						**3.00**					

		COLLEGE ONE Staff						COLLEGE TWO Staff					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	0	0	3	2	2	0	0	0	0	2	5	0
	b. Student Learning	0	0	3	3	1	0	0	0	0	1	6	0
	c. Student Attainment	0	0	2	3	2	0	0	0	0	3	4	0
Average													
a. Student Persistence		**2.86**						**3.71**					
b. Student Learning		**2.71**						**3.86**					
c. Student Attainment		**3.00**						**3.57**					

	COLLEGE ONE Staff						COLLEGE TWO Staff					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	0	1	2	2	2	0	0	0	1	2	4	0
Average	**2.71**						**3.43**					

		COLLEGE ONE Staff						COLLEGE TWO Staff					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	0	0	1	3	3	0	0	0	0	3	4	0
	b. Dev to College Courses	0	0	2	3	2	0	0	0	0	3	4	0
	c. Complete Gatekeeper Courses	0	0	3	3	1	0	0	0	0	3	4	0
	d. Complete Courses with C or Better	0	0	2	3	2	0	0	0	1	3	3	0
	e. Term to Term Persistence	1	0	2	4	0	0	1	0	2	3	1	0
	f. Complete Degree or Certificate	0	0	0	4	3	0	0	0	0	4	3	0
Average													
a. Successful completion of remedial/ developmental courses		**3.29**						**3.57**					
b. Developmental students' success in entry-level college courses		**3.00**						**3.57**					
c. Successful completion of selected gatekeeper courses		**2.71**						**3.57**					
d. Rate of successful course completion for all courses (C or better)		**3.00**						**3.29**					
e. Student persistence—re-enrollment from one term to the next		**2.29**						**2.43**					
f. Completion of certificates and associate degrees		**3.43**						**3.43**					

		COLLEGE ONE Staff						COLLEGE TWO Staff					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	0	0	0	3	4	0	0	0	0	3	4	0
	b. Race/Ethnicity	0	0	0	2	5	0	0	0	0	4	3	0
	c. Income Level	0	1	1	2	3	0	0	0	1	5	1	0
Average													
a. Gender		**3.57**						**3.57**					
b. Race/Ethnicity		**3.71**						**3.43**					
c. Income Level		**3.00**						**3.00**					

	COLLEGE ONE Staff						COLLEGE TWO Staff					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	0	0	4	2	1	0	0	0	0	3	4	0
Average	**2.57**						**3.57**					

		COLLEGE ONE Staff						COLLEGE TWO Staff					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	0	0	3	2	2	0	0	0	0	2	5	0
	b. Resource Allocation	0	0	3	3	1	0	0	0	2	3	2	0
	c. Faculty/Staff Development	0	2	2	3	0	0	0	0	1	3	3	0
	d. Improvement Programs	0	2	1	4	0	0	0	0	2	2	4	0
Average													
a. Strategic Priorities		**2.86**						**3.71**					
b. Resource Allocation		**2.71**						**3.00**					
c. Faculty & Staff Development		**2.14**						**3.29**					
d. Improvement Programs & Services for Learners		**2.29**						**3.71**					

	COLLEGE ONE Staff						COLLEGE TWO Staff					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	1	0	3	2	1	0	0	0	2	3	2	0
Average	**2.29**						**3.00**					

?=”don’t know;” scores in **red** note a difference in responses between both colleges of more than 0.90.

Comparison Between Colleges' Faculty Focus Group Survey Results

Only one survey item existed on which there was a difference of more than 0.90 in the average response scores of the faculty focus groups from College One and College Two. This item was 5c: "Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Student income level." Notably, both college faculty groups had lower average response scores to the item, with the College One faculty group registering a score of 2.80 and the College Two faculty group producing a score of 1.86. In fact, College Two's faculty average response score of 1.86 was the lowest average response score of any of any group on any item. This negative view of the development of a culture of evidence at the college did not manifest itself in the majority of responses from the two faculty groups, though, with both colleges responding very similarly in a fairly positive way about the institution's data-driven efforts.

Table 4.40: Comparison of Survey Results Between College One and College Two Faculty Focus Group Participants

	COLLEGE ONE Faculty						COLLEGE TWO Faculty					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	0	0	2	2	2	0	0	0	2	6	0	2
Average	**3.00**						**2.75**					

		COLLEGE ONE Faculty						COLLEGE TWO Faculty					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	0	0	2	3	1	0	0	1	0	5	2	2
	b. Student Learning	0	0	1	3	2	0	0	1	0	5	2	2
	c. Student Attainment	0	0	0	4	2	0	0	1	0	4	3	2
Average													
a. Student Persistence		**2.83**						**3.00**					
b. Student Learning		**3.17**						**3.00**					
c. Student Attainment		**3.33**						**3.13**					

	COLLEGE ONE Faculty						COLLEGE TWO Faculty					
	0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	0	0	2	2	2	0	0	0	3	3	2	2
Average	**3.00**						**2.88**					

		COLLEGE ONE Faculty						COLLEGE TWO Faculty					
		0	**1**	**2**	**3**	**4**	**?**	**0**	**1**	**2**	**3**	**4**	**?**
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	0	0	0	3	3	0	0	0	0	1	7	2
	b. Dev to College Courses	0	0	1	3	2	0	0	0	1	3	4	2
	c. Complete Gatekeeper Courses	0	0	1	3	2	0	0	0	0	3	5	2
	d. Complete Courses with C or Better	0	0	1	1	4	0	0	0	0	4	4	2
	e. Term to Term Persistence	0	0	1	2	3	0	0	0	1	3	4	2
	f. Complete Degree or Certificate	0	0	0	3	3	0	0	0	0	4	4	2
Average													
a. Successful completion of remedial/ developmental courses		**3.50**						**3.88**					
b. Developmental students' success in entry-level college courses		**3.17**						**3.38**					
c. Successful completion of selected gatekeeper courses		**3.17**						**3.63**					
d. Rate of successful course completion for all courses (C or better)		**3.50**						**3.50**					
e. Student persistence—re-enrollment from one term to the next		**3.33**						**3.38**					
f. Completion of certificates and associate degrees		**3.50**						**3.50**					

		COLLEGE ONE Faculty						COLLEGE TWO Faculty					
		0	1	2	3	4	?	0	1	2	3	4	?
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	0	0	1	2	3	0	0	1	3	1	3	2
	b. Race/Ethnicity	0	0	0	3	3	0	0	1	0	2	5	2
	c. Income Level	0	0	2	2	1	1	1	1	3	2	0	3
Average													
	a. Gender	**3.33**						**2.75**					
	b. Race/Ethnicity	**3.50**						**3.38**					
	c. Income Level	**2.80**						**1.86**					

	COLLEGE ONE Faculty						COLLEGE TWO Faculty					
	0	1	2	3	4	?	0	1	2	3	4	?
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	0	0	2	2	1	1	0	0	1	5	2	2
Average	**2.80**						**3.13**					

		COLLEGE ONE Faculty						COLLEGE TWO Faculty					
		0	1	2	3	4	?	0	1	2	3	4	?
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	0	0	1	0	5	0	0	0	2	4	1	3
	b. Resource Allocation	0	1	2	1	2	0	0	1	2	4	0	3
	c. Faculty/Staff Development	1	1	2	1	1	0	0	0	3	4	0	3
	d. Improvement Programs	0	0	1	3	2	0	0	0	2	4	1	3
Average													
	a. Strategic Priorities	**3.67**						**2.86**					
	b. Resource Allocation	**2.67**						**2.43**					
	c. Faculty & Staff Development	**2.00**						**2.57**					
	d. Improvement Programs & Services for Learners	**3.17**						**2.86**					

	COLLEGE ONE Faculty						COLLEGE TWO Faculty					
	0	1	2	3	4	?	0	1	2	3	4	?
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	0	0	2	4	0	0	0	0	3	3	1	3
Average	**2.67**						**2.71**					

?=”don’t know;” scores in **red** note a difference in responses between both colleges of more than 0.90.

One other noteworthy characteristic unique to the two faculty groups was the use of the "I don't know" response to survey items. While the Likert scale used for the survey items did not include an option to indicate "I don't know," participants were told to leave the question blank if they felt they didn't have the knowledge needed to answer a question. Of all of the groups, only participants in both of the colleges' faculty groups responded in this manner, indicating a lack of knowledge to answer at least one of the questions posed on the survey. More than three faculty participants in the College Two group used the "I don't know" option, and two faculty participants from the College One group responded with an "I don't know" by leaving the question blank.

Comparisons Between Responses to Survey Items of Focus Group Participants and Other Like Employees at the College

Finally, the last piece of data collected and compared involved the administration of the "culture of evidence" survey section of the *Community College Inventory* to a broader sampling of administrators, faculty, and staff at each of the colleges. The purpose behind this institution-wide survey was to establish the extent to which the views of different employee groups regarding the colleges' "culture of evidence" were reflected in the perceptions of those employees that participated in the focus groups. The survey was administered in an online format, and an all-staff email invitation was sent out at each college. While exactly how the all-staff list was defined at each college differed, the all-staff list from both colleges tended to include few part-time faculty. The email invitation included a link to the online survey, which was composed of the same questions asked in each of the focus groups along with four questions drawn from the staff profile form also

completed in each of the focus groups. Employees from both of the colleges were given 2-3 weeks to complete the survey, and reminder emails were sent twice during that open period.

Despite the fact that the institution-wide surveys were coordinated through each of the institution's Office of Institutional Research, response rates were very low. While 74 people at College One accessed the survey, only 37 completed it fully. Of the 37 respondents, six were administrators, 11 were staff members, and 20 were faculty members. The results were similar at College Two, where of the 75 people who accessed the online survey only 40 employees completed the survey in its entirety. Only four administrators responded, while 18 staff members and 18 faculty members participated. Although these groups were small, they were each as large or larger than the similar constituent groups who participated in the focus groups, providing at least a minimal ability to compare the responses of focus group participants and non-focus group participating constituents.

College One Focus Group and Non-Participant Comparisons

Focus Group and Non-Focus Group Administrator Responses. Of all of the constituent groups at College One, the greatest disparity in responses existed between administrators who participated in the focus groups and other administrators at the college. There were eight survey items on which a difference of .90 or more existed between the average responses of these two groups. The largest difference occurred on item 5c: "Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Income level."

Administrators from the focus group responded at an average of 3.80, meaning the college had almost fully implemented the use of student income-level data across the institution; other administrators at the college, though, reported an average response of 2.17, implying the belief that the use of student income-level data was only marginally implemented at the college, limited to pockets across the institution. Other large differences in responses occurred on items related to the institution's commitment to cohort tracking and information on the completion of gatekeeper and developmental courses. An additional interesting pattern is the fact that the average response on all survey items for the non-focus-group administrators is lower than that of the focus-group administrators, implying those administrators who participated in the focus group session were more confident in the presence of a "culture of evidence" at the institution than their colleagues.

It is important to note that despite these findings, the two groups of administrator respondents were very small, with only five administrators present in the Core Team focus group and six administrators responding to the online survey. Because the sample sizes are so small, it seems reasonable that a greater amount of variance in the responses would occur.

Table 4.41: Comparison of Survey Results Between College One's Achieving the Dream Core Team and Other Administrators at the College

	COLLEGE ONE ATD Core Team	**COLLEGE ONE Administrators**
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	**3.20**	**3.00**

		COLLEGE ONE ATD Core Team	COLLEGE ONE Administrators
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	**3.40**	**3.00**
	b. Student Learning	**3.40**	**3.00**
	c. Student Attainment	**3.60**	**3.00**

	COLLEGE ONE ATD Core Team	COLLEGE ONE Administrators
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	**3.80**	**2.67**

		COLLEGE ONE ATD Core Team	COLLEGE ONE Administrators
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	**4.00**	**2.83**
	b. Dev to College Courses	**3.80**	**2.83**
	c. Complete Gatekeeper Courses	**4.00**	**2.67**
	d. Complete Courses with C or Better	**4.00**	**3.00**
	e. Term to Term Persistence	**4.00**	**3.17**
	f. Complete Degree or Certificate	**4.00**	**3.17**

		COLLEGE ONE ATD Core Team	COLLEGE ONE Administrators
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	**3.80**	**3.17**
	b. Race/Ethnicity	**3.80**	**3.17**
	c. Income Level	**3.80**	**2.17**

	COLLEGE ONE ATD Core Team	COLLEGE ONE Administrators
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	**3.60**	**2.67**

		COLLEGE ONE ATD Core Team	COLLEGE ONE Administrators
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	**3.80**	**3.00**
	b. Resource Allocation	**3.60**	**2.67**
	c. Faculty/Staff Development	**3.40**	**2.83**
	d. Improvement Programs	**3.60**	**3.17**

	COLLEGE ONE ATD Core Team	COLLEGE ONE Administrators
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	**3.40**	**3.20**

Scores in **red** note a difference in responses between both colleges of more than 0.90.

Focus Group and Non-Focus Group Staff Responses. The average responses for staff either participating or not participating in the focus groups were far more similar to each other than those found between the administrative groups. Only the responses to four items showed a difference of .90 or more between responses, and like with the administrators, the item with the greatest difference in responses had to do with the use of student income-level data across the institution. Also similar to the results of the administrator response comparison, large differences existed in the extent to which focus-group staff and non-focus-group staff perceived the college was committed to using cohort tracking and data on developmental course completion.

Also interesting to note is that, with the exception of the responses to question 7, "The results from student and institutional assessments are used routinely to inform institutional decisions regarding strategic priorities, resource allocation, faculty and staff development, and improvement programs," the responses of the staff who participated in the focus group were higher than the responses of other staff at the institution. It is possible that with both the administrator and staff focus group participants, participation in the study sessions positively influenced how they responded. Taking this into consideration, the responses of the two groups of staff members are still very similar.

Table 4.42: Comparison of Survey Results Between College One's Staff Focus Group Participants and Other Staff at the College

		COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.		**3.14**	**2.27**

		COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	**2.86**	**2.18**
	b. Student Learning	**2.71**	**2.36**
	c. Student Attainment	**3.00**	**2.45**

		COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.		**2.71**	**1.73**

		COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	**3.29**	**2.27**
	b. Dev to College Courses	**3.00**	**2.55**
	c. Complete Gatekeeper Courses	**2.71**	**2.36**
	d. Complete Courses with C or Better	**3.00**	**2.00**
	e. Term to Term Persistence	**2.29**	**2.36**
	f. Complete Degree or Certificate	**3.43**	**2.64**

		COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	**3.57**	**2.82**
	b. Race/Ethnicity	**3.71**	**2.82**
	c. Income Level	**3.00**	**1.91**

		COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.		**2.57**	**2.18**

		COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	**2.86**	**2.91**
	b. Resource Allocation	**2.71**	**2.82**
	c. Faculty/Staff Development	**2.14**	**2.18**
	d. Improvement Programs	**2.29**	**2.64**

	COLLEGE ONE Focus Group Staff	COLLEGE ONE Staff
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	**2.29**	**2.09**

Scores in **red** note a difference in responses between both colleges of more than 0.90.

Focus Group and Non-Focus Group Staff Responses. The greatest similarity in responses to the survey items occurred between the faculty members who did and did not participate in the study's focus group sessions. A difference of .90 or more only occurred between group responses on two survey items. The two items were both connected to question 7, "The results from student and institutional assessments are used routinely to inform institutional decisions," specifically as it related to strategic priorities and improvement programs. In both cases, the average response of those faculty participating in the focus group was higher than the average response of other faculty at the college.

Table 4.43: Comparison of Survey Results Between College One's Faculty Focus Group Participants and Other Faculty at the College

	COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	**3.00**	**2.80**

		COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	**2.83**	**2.60**
	b. Student Learning	**3.17**	**2.55**
	c. Student Attainment	**3.33**	**3.15**

	COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	**3.00**	**2.55**

		COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	**3.50**	**3.40**
	b. Dev to College Courses	**3.17**	**3.15**
	c. Complete Gatekeeper Courses	**3.17**	**3.05**
	d. Complete Courses with C or Better	**3.50**	**2.95**
	e. Term to Term Persistence	**3.33**	**3.10**
	f. Complete Degree or Certificate	**3.50**	**3.00**

		COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	**3.33**	**3.05**
	b. Race/Ethnicity	**3.50**	**3.05**
	c. Income Level	**2.80**	**2.75**

	COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	**2.80**	**2.63**

		COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	**3.67**	**2.58**
	b. Resource Allocation	**2.67**	**2.21**
	c. Faculty/Staff Development	**2.00**	**2.05**
	d. Improvement Programs	**3.17**	**2.20**

	COLLEGE ONE Focus Group Faculty	COLLEGE ONE Faculty
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	**2.67**	**2.35**

Scores in **red** note a difference in responses between both colleges of more than 0.90.

College Two Focus Group and Non-Participant Comparisons

Focus Group and Non-Focus Group Administrator Responses. The responses of administrators at College Two who participated in the focus group sessions were very similar to the responses of other administrators at the college who completed the online version of the "culture of evidence" survey. In fact, only one instance occurred in which the average response of the first group was more than .90 different than the average response of the second group. On item 4f, "The institution regularly collects, analyzes, and reports data pertaining to the following: Degree or certificate completion," the average response for focus-group administrators was 3.00, an entire point below the average response of other college administrators at 4.00. This means that administrators who were not involved in the focus group sessions were more likely than those involved in the focus groups to perceive that the college had fully implemented the use of degree and certificate completion data in all aspects of the institution. Otherwise, there appeared to be a high level of congruency between the perceptions of both groups of administrators. It is important to note, though, that each group sample was small, with 3 participants in the focus group session and only four in the online response group.

Table 4.44: Comparison of Survey Results Between College Two's Achieving the Dream Core Team Focus Group Participants and Other Administrators at the College

		COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.		**3.00**	**3.25**

		COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	**3.67**	**3.25**
	b. Student Learning	**4.00**	**3.25**
	c. Student Attainment	**3.00**	**3.25**

	COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	**2.67**	**2.75**

		COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	**3.67**	**4.00**
	b. Dev to College Courses	**3.33**	**3.50**
	c. Complete Gatekeeper Courses	**2.67**	**3.25**
	d. Complete Courses with C or Better	**3.67**	**3.75**
	e. Term to Term Persistence	**3.67**	**4.00**
	f. Complete Degree or Certificate	**3.00**	**4.00**

		COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	**2.67**	**3.33**
	b. Race/Ethnicity	**2.67**	**3.50**
	c. Income Level	**2.33**	**2.00**

	COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	**2.67**	**2.50**

		COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	**3.67**	**3.50**
	b. Resource Allocation	**3.33**	**2.75**
	c. Faculty/Staff Development	**3.00**	**3.00**
	d. Improvement Programs	**3.33**	**3.00**

	COLLEGE TWO ATD Core Team	COLLEGE TWO Administrators
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	**2.33**	**2.50**

Scores in **red** note a difference in responses between both colleges of more than 0.90.

Focus Group and Non-Focus Group Staff Responses. As with the two groups of administrators, the results of the responses of staff members at College Two who participated in the focus group sessions were very similar to the responses of staff members who participated in the online survey. On none of the items was there a difference of .90 or more between the average response rates of both groups. The average responses of the focus-group staff members tended to be higher than the average responses of the non-focus-group staff, but the difference the two numbers was still small. The sample size of each group was also larger than the administrator groups, with 11 staff members participating in the focus group session and 18 responding to the online survey.

Table 4.45: Comparison of Survey Results Between College Two's Staff Focus Group Participants and Other Staff at the College (18)

	COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	**3.00**	**2.89**

		COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	**3.71**	**3.28**
	b. Student Learning	**3.86**	**3.28**
	c. Student Attainment	**3.57**	**3.17**

	COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	**3.43**	**3.00**

		COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	**3.57**	**3.44**
	b. Dev to College Courses	**3.57**	**3.06**
	c. Complete Gatekeeper Courses	**3.57**	**3.11**
	d. Complete Courses with C or Better	**3.29**	**3.17**
	e. Term to Term Persistence	**2.43**	**3.22**
	f. Complete Degree or Certificate	**3.43**	**3.28**

		COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	**3.57**	**3.00**
	b. Race/Ethnicity	**3.43**	**3.06**
	c. Income Level	**3.00**	**2.39**

	COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	**3.57**	**3.17**

		COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	**3.71**	**3.22**
	b. Resource Allocation	**3.00**	**2.83**
	c. Faculty/Staff Development	**3.29**	**3.17**
	d. Improvement Programs	**3.71**	**3.17**

	COLLEGE TWO Focus Group Staff	COLLEGE TWO Staff
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	**3.00**	**3.17**

Focus Group and Non-Focus Group Staff Responses. A comparison of the results of the final employee constituent group, faculty members, revealed the same pattern as the previous comparisons of employee groups at College Two. The average responses of faculty who completed the "culture of evidence" survey during the faculty focus group session were very similar to the average responses of the college faculty who completed the online survey, with no average response differing by more than .90 points between the two groups. Unlike the staff comparison, though, the responses of faculty members who answered the online survey tended to be slightly more positive than the responses of the faculty members from the focus group session.

Table 4.46: Comparison of Survey Results Between College Two's Faculty Focus Group Participants and Other Faculty at the College (18)

	COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
1. Institutional research and information systems provide systematic, timely, useful, and user-friendly information about student persistence, learning, and attainment.	**2.75**	**3.28**

		COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
2. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding:	a. Student Persistence	**3.00**	**3.28**
	b. Student Learning	**3.00**	**3.33**
	c. Student Attainment	**3.13**	**3.17**

	COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
3. The institution is committed to cohort tracking of entering students to determine rates of attainment and to identify areas for improvement.	**2.88**	**3.06**

		COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
4. The institution regularly collects, analyzes, and reports data pertaining to the following:	a. Complete Dev Courses	**3.88**	**3.61**
	b. Dev to College Courses	**3.38**	**3.61**
	c. Complete Gatekeeper Courses	**3.63**	**3.61**
	d. Complete Courses with C or Better	**3.50**	**3.61**
	e. Term to Term Persistence	**3.38**	**3.44**
	f. Complete Degree or Certificate	**3.50**	**3.39**

		COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
5. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including:	a. Gender	**2.75**	**3.06**
	b. Race/Ethnicity	**3.38**	**3.28**
	c. Income Level	**1.86**	**2.61**

	COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
6. The institution regularly assesses its performance and progress in implementing educational practices which evidence shows will contribute to higher levels of student persistence and learning.	**3.13**	**3.06**

		COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
7. The results from student and institutional assessments are used routinely to inform institutional decisions regarding:	a. Strategic Priorities	**2.86**	**3.39**
	b. Resource Allocation	**2.43**	**3.11**
	c. Faculty/Staff Development	**2.57**	**3.00**
	d. Improvement Programs	**2.86**	**3.06**

	COLLEGE TWO Focus Group Faculty	COLLEGE TWO Faculty
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	**2.71**	**3.13**

Scores in **red** note a difference in responses between both colleges of more than 0.90.

CONCLUSION

This chapter reviewed the results of the data collected for this study: namely, focus group affinity categories and their corresponding Affinity Relationships Figures (ARDs), emerging themes from the interview discussions with each college's president, and the tabulated results from a twelve-question survey on the characteristics of a "culture of evidence" at each institution as perceived by all study participants and by staff, administrators, and faculty in general at each college. The results from the focus groups were compared against each other as well as against the responses from the president's interview, and then these findings were compared to similar groups at the other institution. The findings showed that similarities and differences existed in the perceptions of study participants at both the constituency group level as well as at the institutional level. Finally, the results of the "culture of evidence" survey were compared to the broader sampling of employees from each college to assess the extent to which the responses of focus group participants reflected the responses of similar constituents at the institution. These comparisons supported the conclusion that while focus group participants' perceptions were more representative of the views held by the larger college community at one college than at the other, similarities existed between the responses of each of the three employee constituent groups at each college.

Chapter 5: Implications

INTRODUCTION

As Knapp et al. (2006) notes, with an increased focus on the use of data in decision making and planning, "the capacity for educational improvement could increase significantly" (p. 4). Understanding the perceptions of college constituents involved in the process of developing data-driven environments can assist institutions in building upon strengths in their efforts while addressing barriers that may exist. This study examined the perceptions of college employees at two colleges committed to the creation of a "culture of evidence," with a focus on the following research questions:

- How do faculty, staff, and administrators on the college's Achieving the Dream and Data teams perceive the presence of a "culture of evidence" at their institution, as defined by the *Community College Inventory*?
- What is the understanding of the faculty, staff, and administrative team members of a "culture of evidence"? What do they perceive are the characteristics at the institution that either contribute or inhibit the development of a data-driven culture? How do they perceive the system of relationships these characteristics construct?
- How do faculty, staff, and administrators not directly participating in the college's Achieving the Dream efforts perceive the presence of a "culture of evidence" as defined by the *Community College Inventory*?
- To what extent has the system underlying a "culture of evidence" at the institution, as perceived by the Core and Data team members, permeated the

perceptions of faculty, staff, and administrators at the college not directly participating in the Achieving the Dream process?

In this chapter, each of these questions will be addressed, and lessons learned will be noted. These lessons will then be discussed in relation to their usefulness for other institutions.

ACHIEVING THE DREAM TEAM MEMBERS' SURVEY PERCEPTIONS

The first research question focused on the perceptions of college employees committed to and involved in promoting and maintaining a data-driven institutional culture. In order to establish a common definition for the components of a "culture of evidence," the "culture of evidence" section of McClenney and McClenney's (2003) *Community College Inventory: Focus on Student Persistence, Learning, and Attainment* was distributed to all participants. Responses were aggregated by Achieving the Dream team affiliation (either Core Team or Data Team) for each college. The responses were measured on a 5-point scale, with 0 being "no implementation," 1 being "under discussion," 2 being "marginal implementation," 3 being "partial implementation," and 4 being "full implementation."

College One

All of the participants of both the Achieving the Dream Core Team and Data Team focus groups responded to the eight-item "culture of evidence" survey. Each is discussed separately, and then the results for both groups are compared.

College One Achieving the Dream Core Team Survey Results

Overall, participants from College One's Achieving the Dream Core Team focus group felt confident in their institution's efforts to develop a data-driven institutional culture. The total average score of these responses was a 3.70, implying the college had almost fully implemented a "culture of evidence" across the entire institution. All of the participants perceived five characteristics listed on the survey to be "fully implemented" across the college, including the collection, analysis, and reporting of data on successful completion of all courses (specifically developmental courses and gatekeeper courses), student re-enrollment from one term to the next, and completion of certificates and degrees.

Table 5.01: College One Core Team's Highest Scored "Culture of Evidence" Survey Items

Survey Item	**Average**
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	4.00
4c. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper courses	4.00
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	4.00
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	4.00
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	4.00

College One Achieving the Dream Data Team Survey Results

Participants in College One's Achieving the Dream Data Team focus group were less confident in the presence of a "culture of evidence" at their institution. The total average survey score for the group was 3.14, meaning the Data Team participants

perceived evidence of partial implementation of a "culture of evidence" at the institution—that the implementation of the majority of survey components was limited to "some areas of the institution in a visible and substantial way." The group did not see any survey item component to be fully implemented at the college, but it did perceive four components to be close to full implementation, three of which were found among the Core Team's highest rated components: the collection, analysis, and reporting of data on the rate of successful course completion for all courses, student re-enrollment from term to term, and certificate and degree completion. The fourth high-rated item pertained to the participants' belief that the college had almost fully institutionalized the use of data depicting student persistence, learning and attainment disaggregated by race/ethnicity.

Table 5.02: College One Data Team's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.75
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	3.75
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.75
5b. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/ethnicity	3.75

College One Achieving the Dream Core and Data Team Results Comparison

In answering the first research question as it pertains to College One, participants on the Achieving the Dream Core and Data teams perceived the institution as having made substantial progress in developing a data-driven environment across the college as defined by the *Community College Inventory*. The Core Team, composed primarily of

executive-level administrators, was very confident in the presence of a data-driven culture, while participants on the Data Team, including members of the college's Institutional Research Office, were positive but less convinced that the full implementation of a data-driven culture has been achieved. Some of this variance in perception could be explained by the roles performed by the different teams: since Data Team members were charged with the actual collection, analysis, and reporting of student data, they would more likely experience the challenges of systematizing these data processes and perceive detailed elements of these processes where improvements could be made. The Core Team's responsibilities, on the other hand, were more global in nature, and their perceptions would naturally be less connected to specific processes and more associated with general feelings and trends emerging across the institution. Even with taking these different responsibilities into consideration, the participants from both teams shared common perceptions on the data-driven components most visible at the institution, revealing a fairly uniform view between the two groups regarding the college's efforts.

College Two

Participants in the focus groups held at College Two for Core Team members and participants from other taskforces and committees related to Achieving the Dream (Participants focus group) completed the *Community College Inventory*. Again, each individual group is discussed separately, and then the results for both groups are compared.

College Two Achieving the Dream Core Team Survey Results

Participants in College Two's Core Team focus group perceived a "culture of evidence" to exist at a partially implemented level at the institution. With a total average score of 3.13, the group felt that components of a data-driven culture existed in a "visible and substantial way" in some areas of the institution, but not in all areas. The participants saw one component as being fully implemented at the college: the institution's culture was seen as promoting willingness of college constituents (including governing board members, administrators, faculty, staff and students) to rigorously examine and openly discuss the institution's performance in student learning. The group also rated five other components as being almost fully implemented at the college, including the open examination and discussion of student persistence; the collection, analysis, and reporting of successful completion of all courses (specifically developmental courses) and certificate and degree completion; and the use of student and institutional assessments in informing the development of strategic priorities.

Table 5.03: College Two Core Team's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
2b. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding: Student learning	4.00
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of developmental coursework	3.67
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.67
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	3.67
7a. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Strategic priorities	3.67

College Two Achieving the Dream Participant Focus Group Survey Results

Participants in College Two's Achieving the Dream Participant focus group similarly perceived the presence of a "culture of evidence" at their institution as being partially implemented. The total average survey score for the group was 3.33, implying that Achieving the Dream participants, like the Core Team participants, saw the implementation of most survey components as being limited to only "some areas of the institution in a visible and substantial way." While the group did not see any survey item component to be fully implemented at the college, it noted 10 components as being almost fully implemented, more than any other focus group at either college. The two survey items rated the highest were item 4a, "The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses," and item 4f, "The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees."

Table 5.04: College Two Participants' Group Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	3.80
4b. The institution regularly collects, analyzes, and reports data pertaining to the following: Developmental students' success in entry-level college courses	3.80
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.60
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	3.60
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.60
5a. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Gender	3.60
5b. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/ethnicity	3.60
7a. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Strategic priorities	3.60
7b. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Resource allocation	3.60
7d. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Improvements in programs and services for learners	3.60

College Two Achieving the Dream Core and Data Team Results Comparison

The results from both the Core Team and the Participants group at College Two were very similar, with all participants indicating the belief that the college had attained a partial implementation of a "culture of evidence." Both groups also rated the same four survey components—items 4a, 4d, 4e, and 7a—as among the "most implemented" data-driven characteristics at the institution. While the Participant group perceived twice as many components as the Core Team to be almost fully implemented, a core understanding among all participants of the college's progress in creating a data-driven culture seemed very evident.

Comparison of Perceptions of Both Colleges

In adopting strategies as a part of the Achieving the Dream initiative to increase student success, College One and College Two made the commitment to develop data-driven cultures at their institutions. After almost two years of participation in the initiative, participants in the Achieving the Dream efforts at the two colleges perceived substantial progress had been made in reaching this goal. The Core Team participants at College One felt a "culture of evidence" had been fully implemented at their institution; participants from the other three groups saw implementation, though significant, as limited to only some areas of the college.

Interestingly, all four groups saw significant institutional progress in the collection, analysis, and reporting of data pertaining to the rate of successful course completion for all courses (C or better) and to student persistence—re-enrollment from one term to the next. This common perception of success regarding these components could be due to the State's Higher Education Board for Community and Technical Colleges' emphasis on these data in their data-gathering requirements. However, the State also requires the colleges to report other data components listed on the survey that were not ranked as highly. It is also possible that the discussion and availability of data on student retention is more visible at the institutions because of its direct connection to issues of funding. Also interesting to note is that three of the groups rated the implementation of the use of student data on income level as one of the least achieved areas of focus at the colleges. This perception is reflected in the acknowledgement of Achieving the Dream partner agencies that better measurements of student income and socioeconomic status need to be found. That the Core Team members at College One

perceived such data was almost fully implemented into core work of the college would appear to be an anomaly.

Table 5.05: Highest and Lowest Rated Survey Items Shared by both Colleges

Highest Rated Survey Items	**Average**
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.75
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	3.75
Lowest Rated Survey Item	**Average**
5c. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Student income level	2.81

ACHIEVING THE DREAM TEAM MEMBER'S PERCEPTIONS OF INSTITUTIONAL CHARACTERISTICS

The second research focus of this study was to gain a clearer understanding of how members of each college's Achieving the Dream Core and Data teams conceived a "culture of evidence"—to comprehend the characteristics they felt were integral to its development. In focus group sessions, participants from each college's Core and Data teams identified themes, or affinities, central to the institution's efforts to become culturally data-driven and then organized those themes according to perceived interrelationships. In addition, the president of each college was interviewed to gain a similar understanding of her perceived fundamental, characteristics of a data-driven culture. While both presidents were members of their college's Core team, the separate president interviews allowed for comparison between the perceptions of the executive leader and other leaders on the Core Team.

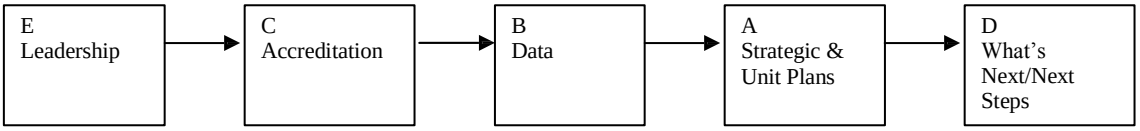
College One

College One Core Team Affinities

Participants in College One's Core Team focus group identified five themes they perceived to be central to the college's commitment to developing and maintaining a "culture of evidence." These affinities included *Leadership, Accreditation, Data, Strategic and Unit Plans,* and *What's Next/Next Steps.* Core Team participants believed that leadership was the primary driver of the institution's data-driven efforts, and "leadership" was predominantly associated to the influence and direction of the college's president. The college's leadership team—or its president—were seen as framing the institution's approach to the accreditation process, which determined which data would be collected, and the collected data determined the strategic and unit plans adopted by the college. The adopted strategic and unit plans then determined the next steps taken by the institution.

Of the results from all of the focus groups held, College One's Core Team participants perceived the relationships between their identified affinities as the most linear. In their relationships model, *Leadership* initiated a simple sequence of events that led to data usage and decision making for the college. The clarity and linear aspect of this model could be at least partly due to the Core Team participants' understanding of how the design of these sequences was initially intended.

Figure 5.01: College One Core Team Focus Group Affinity Relationship Figure (ARD)



SUMMARY OF RELATIONSHIPS:

What's Next/Next Steps are driven by the Strategic and Unit Plans, which are driven by Data, which are driven by the Accreditation Process, which is driven by how Leadership approaches accreditation.

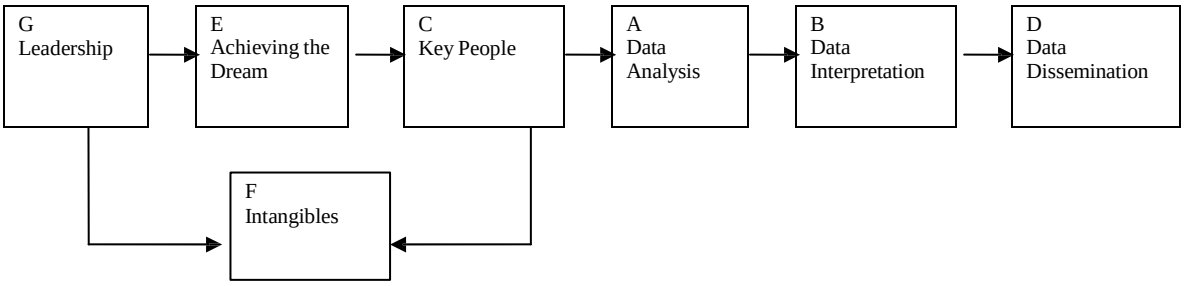
College One Data Team Affinities

Six affinity groups were identified by participants in the College One Data Team focus group: *Leadership, Achieving the Dream, Key People, Data Analysis, Data Interpretation, Data Dissemination,* and *Intangibles.* Like the Core Team participants, the Data Team participants perceived the college's president and executive team to be the main drivers of developing an institutional "culture of evidence." The executive team chose to participate in the Achieving the Dream initiative, which empowered key people at the college to direct the analysis, interpretation, and dissemination of data. How data were analyzed determined their interpretation, and how data were interpreted determined how the data were shared with the larger college community. The executive leadership team and key people—mid-level managers and researchers—also influenced "intangibles," or "results you can't define with a number," such as collegiality or student cultural comfort with the institution.

As with the results from the Core Team focus group, the relationship model between affinities as perceived by the Data Team participants is also fairly linear in nature. Again, *Leadership* at the college is seen as influencing a direct and clearly defined

sequence of steps that lead to the dissemination of data. This group, though, did recognize that some aspects of the college process did not "fit" into the linear model, and they created an affinity, *Intangibles*, that lumped all non-linear characteristics together.

Figure 5.02: College One Data Team Focus Group Affinity Relationship Figure (ARD)



SUMMARY OF RELATIONSHIPS:

Leadership drives AtD, which drives key people, who drive data analysis and thereby data interpretation. Data interpretation leads to how data is disseminated, and also drives the leadership. Only Leadership and Key People have influence on Intangibles.

Comparison of College One Core and Data Team Affinities

College One Core and Data Team focus group participants perceived the college president as being the primary driver of the institution's actions in creating a "culture of evidence." Both groups also identified an external organization—either the accreditation body or the Achieving the Dream initiative—as being the secondary driver of the college's work. While the Core Team identified data as an affinity group, it saw data as an intermediary step to planning and decision making, while the end product of the Data Team's relational model was merely data dissemination. This difference in model outcomes could be due to the roles played by each group: the Core Team, composed of many executive staff members, was more likely to link its perceptions to decision

making, while the Data Team, including institutional researchers, was more likely to focus on the processing and sharing of data information across the college. Finally, both groups perceived the development of a data-driven culture to be very linear in nature, though the Data Team participants did allow for a category of items they perceived did not fit the linear model.

College One President Results Comparison

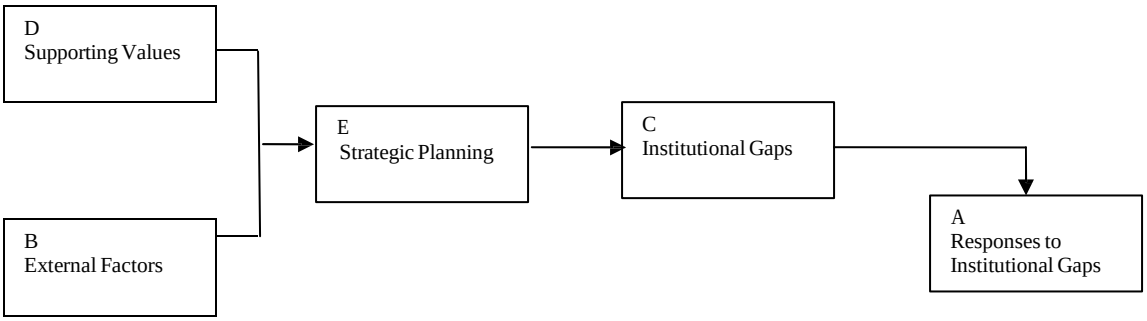
In response to interview questions regarding the development of a "culture of evidence" at College One, the president articulated 6 themes she felt applied to the college's efforts: *Communication, Trust Between Administration and Faculty/Staff, Processes, Move Towards Innovation, Influence of President,* and *Influence of Faculty.* Like the participants in the Core and Data Team focus groups, the president saw her leadership as one of the main drivers behind making the institutional culture data driven. She also saw the college's activities as being linear and driven by planning and decision-making processes, a perception shared with the Core Team. However, the president perceived more than the two focus groups the impact of trust and relationships on the culture of the institution, specifically citing the advances and damage that can be caused by faculty members at the college. And unlike the two focus groups, she attributed none of the influence on the "culture of evidence" to external forces. As the senior executive leader, the president believed the entire development of a data-driven culture was internally driven.

College Two

College Two Core Team Affinities

Like the participants of the College One's Core Team focus group, the participants of College Two's Core Team focus group organized their perceptions of the characteristics of a "culture of evidence" into five affinity groups. These groups included: *Supporting Values, External Factors, Strategic Planning, Institutional Gaps,* and *Responses to Institutional Gaps*. These Core Team participants perceived that both the institution's supporting values as well as external factors were the primary drivers of the development of a data-driven culture at College Two. *Supporting Values* included the college's mission, vision, and value statements, while *External Factors* included participation in Achieving the Dream and structural limitations of being one college in a five-college district. These values and external factors drove the college's strategic planning process, which in turn influenced what the college did well and where institutional gaps occurred. However, the Data Team participants believed that while supporting values initially drove the process, only external factors and the institutional gaps themselves strongly influenced how people at the college reacted to institutional gaps.

Figure 5.03: College Two Core Team Focus Group Affinity Relationship Figure (ARD)



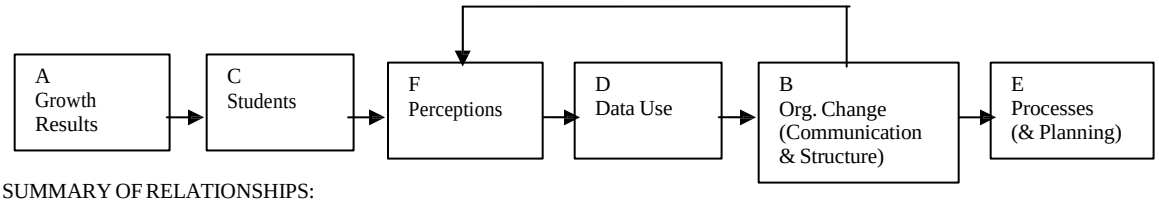
SUMMARY OF RELATIONSHIPS:

Both the college's Supporting Values as well as External Factors drive the college's Strategic Planning, which in turn influence what the college does well and where Institutional Gaps occur. However, only External Factors and the Institutional Gaps themselves strongly influence how people at the college Respond to Institutional Gaps.

College Two Achieving the Dream Participants Affinities

The members of the Achieving the Dream Participants focus group identified six themes related to the college's efforts to create a data-driven culture: *Growth Results, Students, Perceptions, Data Use, Organizational Change,* and *Processes.* With student enrollment swelling over the past few years, the participants felt the results of this growth determined all actions (or responses) of the college. Student enrollment growth meant that students themselves were at least secondary drivers in the efforts of the college, and how students interacted with the college influenced how "people [saw] data and communicate[d] conflict that exist[ed]." Employee perceptions determined how data were used, which determined needs for organizational change, which led to the implementation of processes and planning models. The needed organizational changes uncovered by the use of data also influenced the perceptions of college employees, which cyclically impacted what data were collected.

Figure 5.04: College Two Achieving the Dream Participants Focus Group *Affinity*



SUMMARY OF RELATIONSHIPS:

The Results of Growth at the college influences Student Involvement in processes, which drives the Perceptions of people at the college regarding data and communication. These perceptions in turn drive data and planning, which lead to a Need for Organizational Change as well to the use of specific college Processes. The Need for Organizational Change also influences college constituents' perceptions.

Comparison of College Two Core and Data Team Affinities

Participants from College Two's Core Team focus group perceived a fairly linear approach to the use of data in planning and decision making at the college. Overarching college ideals were seen as setting a tone in which strategic planning was developed to address institutional gaps. That said, though, this group perceived that specific external factors had more impact on the college's response to institutional gaps than did the college's overarching ideals. Members of the Achieving the Dream Participants group saw the college's efforts as almost solely driven by one external factor: student enrollment growth. The Participants group also believed that employee perceptions had more influence on the college than established processes (which were the end outcome), as opposed to the Core Team's view that established processes informed the perceptions held by faculty and staff members. This incongruence implies that if the college's supporting values and processes are structuring how data are used to change the college, Achieving the Dream Participants not directly serving on the Core Team are unaware of these influences.

College Two President Results Comparison

Through a one-hour interview, the president at College Two identified 5 themes she felt best captured the creation of a data-driven culture at the institution. These 5 themes included *Strategic Planning*, *Communicating Data*, *Making Data Usable*, *Continuous Improvement*, and *Collaboration.* Her emphasis on strategic planning was reflected in the responses of the Core Team participants, who also identified planning as a main driver of the college's efforts. The president's mention of communicating data, making it usable, and promoting collaboration are somewhat reflective of the focus on employee involvement and perceptions in the results of the Achieving the Dream Participants group. The president's understanding appeared to also be less linear, with built-in cyclical relationships, as in the Participants' model, being a natural part of continuous improvement. Finally, like the president of College One, the president of College Two did not mention external forces as part of the drivers of a data-driven culture, and instead discussed the importance of internal components.

Comparison of Affinity Results from Both Colleges

The focus group participants at both colleges identified external factors that influenced the efforts of the colleges to establish data-driven environments. However, the presidents at both institutions felt the locus of control existed entirely internally. This means that both presidents believed they had more control on the outcomes of the institution than focus group participants felt were possible. All respondents at College One recognized that the president was a main driver of data-driven practices at the institution, whereas none of the respondents identified the role of the president as a main

affinity. However, the president and the Core Team participants mentioned the importance of overarching ideals and processes at the college, which were directly influenced by the president. The respondents at College One were also more likely to focus on the data in data processes, while the respondents at College Two were less likely to specifically focus on data and instead emphasized employee perceptions and responses. This difference could partially be due to the fact that an Achieving the Dream Participants focus group was held at College Two in the place of a Data Team focus group, and so the respondents were less connected to the use of data than College One's Data Team members, who included staff from the college's institutional research office.

NON-ACHIEVING THE DREAM ADMINISTRATORS, STAFF, AND FACULTY SURVEY PERCEPTIONS

Similar to the first research question, the third research focus was designed to capture the perceptions of faculty and staff not directly involved in the college's Achieving the Dream efforts. In maintaining the common definition for the components of a "culture of evidence" that were used with the Achieving the Dream Core and Data Team focus groups, the "culture of evidence" section of McClenney and McClenney's (2003) *Community College Inventory: Focus on Student Persistence, Learning, and Attainment* was also distributed to staff and faculty participants. Responses were aggregated by job classification (either faculty, administrators, or staff) for each college. The responses were measured on a 5-point scale, with 0 being "no implementation," 1 being "under discussion," 2 being "marginal implementation," 3 being "partial implementation," and 4 being "full implementation."

College One

All of the participants of both the staff and faculty focus groups responded to the eight-item "culture of evidence" survey. In addition, 37 other faculty, staff, and administrators at the college also responded to the eight-item survey online. The responses from each group are discussed separately, and then the results for both groups are compared.

College One Staff Focus Group Survey Results

Out of all focus groups held in this study, College One's Staff focus group results are the lowest, at an average score of 2.71. This means that staff participants perceived the presence of a "culture of evidence" at the institution to mainly consist of isolated examples around the institution not entirely visible in a "substantial way." The group only perceived five survey item characteristics to be more than partially implemented at the college: the willingness of college constituents to examine and discuss student persistence; the collection, analysis, and reporting of student success in coursework (especially developmental and gatekeeper); and the use of student and institutional assessment results to inform improvements in programs and services for learners. Of the remaining survey items, no characteristics of a data-driven culture received an average score of more than 2.0, or the level of "marginal" implementation.

Table 5.06: College One Staff Focus Group's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
2a. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding: Student persistence	3.29
4b. The institution regularly collects, analyzes, and reports data pertaining to the following: Developmental students' success in entry-level college courses	3.43
4c. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper courses	3.57
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.71
7d. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Improvements in programs & services for learners	3.14

College One Faculty Focus Group Survey Results

Participants in College One's faculty focus group were more confident than their staff counterparts in the presence of a "culture of evidence" at their institution. The total average survey score for the group was 3.08, revealing the belief that the implementation was partially complete, or the majority of survey components were limited to "some areas of the institution." Six survey items were rated by the group to be close to almost fully implemented. Two of these items were also among the staff group's highest-ranked items: the college's collection, analysis, and reporting of data related to the rate of successful course completion for all courses; and the college's use of student and institutional assessment results to inform improvements in programs and services for learners. The other four items included the collection, analysis, and reporting of data on successful student completion of developmental coursework and degree and certificate programs, and the college's use of assessment data to inform the development of the institution's strategic priorities.

Table 5.07: College One Faculty Focus Group's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	3.50
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.50
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.50
5b. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/ethnicity	3.50
7a. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Strategic priorities	3.67
7d. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Improvements in programs & services for learners	3.50

College One Non-Focus Group Administrator Group Survey Results

The group of administrators who responded to the online version of the "culture of evidence" survey and did not participate in a focus group at College One perceived the presence of a data-driven culture as almost partially implemented across the college. The overall average score by these participants was 2.92. Only six survey items received an average score of more than 3.0—the level of "partial implementation." These items included the collection, analysis, and reporting of data on student persistence rates from one term to the next, as well as completion of degrees and certificates; the routine disaggregation and reporting of student data by gender and race/ethnicity; the use of student and institutional assessment data to inform improvements in programs and services for learners; and the general feel that beliefs and assertions at the college about "what works" are evidence-based.

Table 5.08: College One Non-Focus Group Administrators' Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	3.17
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.17
5a. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Gender	3.17
5b. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/ethnicity	3.17
7d. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Improvements in programs & services for learners	3.17
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	3.20

College One Non-Focus Group Staff Survey Results

Of all group responses, the overall results of College One staff who answered the online survey and did not attend a focus group were the lowest. These staff members scored the presence of a data-driven culture at the institution at a "marginal" level with an overall score of 2.38. This group perceived that none of the characteristics of a "culture of evidence" as described by the survey were even partially implemented at the college. The highest-rated items included the college's efforts to disaggregate data by gender and race/ethnicity and the use of assessment data to inform institutional strategic priorities and resource allocations.

Table 5.09: College One Non-Focus Group Staff's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
5a. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Gender	2.82
5b. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/ethnicity	2.82
7a. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Strategic priorities	2.91
7b. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Resource allocation	2.82

College One Non-Focus Group Faculty Survey Results

Although more positive than the results of the staff group, the non-focus group faculty survey respondents rated the college's efforts to develop a data-driven culture a 2.76, implying a perception of the college as having almost established components of a "culture of evidence" in visible ways across the institution. The five top-rated survey items included the willingness of college constituents to examine and discuss student attainment; the college's collection, analysis, and reporting of data on developmental students' success in entry-level college courses and their successful completion of selected gatekeeper courses; and the college's commitment to disaggregating and reporting student data by gender and race/ethnicity.

Table 5.10: College One Non-Focus Group Faculty's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
2a. The institutional culture promotes willingness of governing board members, administrators, faculty, and students to rigorously examine and openly discuss institutional performance regarding: Student attainment	3.15
4b. The institution regularly collects, analyzes, and reports data pertaining to the following: Developmental students' success in entry-level college courses	3.15
4c. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper courses	3.05
5a. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Gender	3.05
5b. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Race/ethnicity	3.05

Comparison of Results from Non-Achieving the Dream Participants

In response to the third research question regarding the perceptions of constituents at College One not participating directly in the efforts of the college's Achieving the Dream work, the survey results from both participants from the staff and faculty focus groups and the rest of the responding employees show that college employees not involved in Achieving the Dream perceive a "culture of evidence" to be less than partially implemented at the college. Non-focus group employees tended to perceive less progress in the development of a data-driven culture than participants in the focus groups, but all groups except the faculty focus group rated the college's efforts at less than a 3.00, or the level of partial implementation.

There were common themes in the perceptions of which characteristics of a "culture of evidence" were most visible at the institution. All but one group highly rated the college's efforts to disaggregate and report data by gender and race/ethnicity. Three of the groups felt confident in the college's progress in collecting, analyzing, and

reporting data on student completion of certificates and associate degrees. Of all of the highest rated items for all of the groups, only one was not duplicated among the lists. This means that commonly shared perceptions existed at the college regarding what the most prominent components of a data-driven culture were at the institution.

Comparison of Results from Non-Achieving the Dream & Achieving the Dream Participants

Members of College One's Core and Data teams perceived a more established presence of a data-driven institutional culture than other employees at the college not involved in the Achieving the Dream work. While both the Core and Data team groups rated the college as having developed more than a partial implementation of a "culture of evidence," non-Achieving the Dream participants saw the data-driven culture as being less than partially evident. Thus, those charged with the creation of a "culture of evidence"—Achieving the Dream team members—were more likely to see its existence than those further separated from the initiative.

Four survey items appeared amongst the lists of the highest rated data-driven characteristics by multiple non-Achieving the Dream groups and at least one Achieving the Dream group. The two main survey characteristics common among the responses of the non-Achieving the Dream groups—the college's practice of disaggregating and reporting student data by gender and race/ethnicity—were also rated high by members of the college's Data Team focus group. The Core and Data team reported substantial evidence of the college's collection, analysis, and reporting of successful student completion of all courses (specifically developmental courses) and the college's use of

student and institutional assessment to inform the development of strategic priorities, and these perceptions were each mirrored in two non-Achieving focus groups' results. As for the non-Achieving the Dream groups, all but three of the highest rated survey items were duplicated amongst the responses of the Achieving the Dream and non-Achieving the Dream groups. This means that while differences existed between Achieving the Dream and non-Achieving the Dream groups in the perceptions of the extent to which a "culture of evidence" had been implemented at the college, all respondents shared similar views of the characteristics that were most evident at the institution.

College Two

Participants in the focus groups held at College Two for staff and faculty not directly involved in the college's work with Achieving the Dream completed the *Community College Inventory* section on a "culture of evidence." In addition, 40 administrators, faculty, and staff members completed an online version survey. The results from each of these groups are discussed separately, and then the results are compared between these groups and the results from the college's Achieving the Dream Core and Data teams.

College Two Staff Focus Group Survey Results

Staff who participated in College Two's staff focus group rated the overall presence of a "culture of evidence" at 3.21, slightly above a level of "partial implementation." This means these participants perceived that the characteristics of a data-driven culture as presented by the *Community College Inventory* were implemented in some areas of the college in a visible and substantial way. Two of the three highest-

rated survey items involved the college's willingness of governing board members, administrators, faculty, staff, and students to rigorously examine and openly discuss institutional performance regarding student persistence and learning. The third highest-rated survey item focused on the college's use of assessment data to inform the development of strategic priorities.

Table 5.11: College Two Staff Focus Group's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
2a. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding: Student persistence	3.71
2b. The institutional culture promotes willingness of governing board members, administrators, faculty, staff and students to rigorously examine and openly discuss institutional performance regarding: Student learning	3.86
7a. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Strategic priorities	3.71

College Two Faculty Focus Group Survey Results

Reporting the lowest level of confidence in the presence of a data-driven culture at College Two of all surveyed groups, faculty members participating in the college's non-Achieving the Dream faculty focus group reported an overall score for the college of a 3.03. These participants still shared the same perception held by other groups that the college had partially implemented a data-driven environment, but they were less confident of progress made beyond this point. Four survey items were ranked highly by the participants, each having to do with the college's collection, analysis, and reporting of student data. Key areas of focus included data on successful course completion for all

classes, especially developmental and gatekeeper courses, and student completion of certificates and associate degrees.

Table 5.12: College Two Faculty Focus Group's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	3.88
4c. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper courses	3.63
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.50
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.50

College Two Non-Focus Group Administrator Group Survey Results

The group of administrators who responded to the online version of the "culture of evidence" survey and did not participate in a focus group at College Two perceived the presence of a data-driven culture as being more than partially implemented across the college. The overall average score by these participants was 3.22. This administrator group reported three characteristics listed on the survey as being entirely implemented at the institution, and one more characteristic was considered very close to fully implemented. These characteristics included the collection, analysis, and reporting of data pertaining to the successful student completion of all courses (specifically developmental), student persistence from one term to the next, and student completion of certificates and associate degrees.

Table 5.13: College Two Non-Focus Group Administrators' Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	4.00
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful course completion for all courses (C or better)	3.75
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	4.00
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	4.00

College Two Non-Focus Group Staff Survey Results

Similar to the other response groups not directly involved in the college's Achieving the Dream work, the non-focus group staff respondents perceived the college as having partially implemented across the institutions the characteristics of a "culture of evidence." Along with reporting an overall score for the college of a 3.10, the group rated six survey items above 3.20. These items which the respondents felt were solidly implemented at a partial level included College Two's willingness to rigorously examine and openly discuss data on student persistence and learning; the college's efforts in collecting, analyzing, and reporting data pertaining to student persistence, successful completion of developmental classes, and completion of certificates and associate degrees; and the college's routine use of institutional and student assessments in informing the development of strategic priorities.

Table 5.14: College Two Non-Focus Group Staff's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
2a. The institutional culture promotes willingness of governing board members, administrators, faculty, and students to rigorously examine and openly discuss institutional performance regarding: Student persistence	3.28
2b. The institutional culture promotes willingness of governing board members, administrators, faculty, and students to rigorously examine and openly discuss institutional performance regarding: Student learning	3.28
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	3.44
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	3.22
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.28
7a. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Strategic priorities	3.22

College Two Non-Focus Group Faculty Survey Results

With an overall average score of 3.25, the faculty who did not participate in the college's focus groups but responded to the online institutional survey perceived the college as having implemented a "culture of evidence" at a level slightly higher than "partial." This means these faculty felt strong evidence existed to support the assertion that key characteristics of a data-driven culture as defined by the *Community College Inventory* existed in a visible and substantial way. The five survey items rated highest by the group included the college's collection, analysis, and reporting of data on student successful completion for all courses (specifically developmental and gatekeeper courses), developmental students' success in entry-level college courses, and student persistence from one term to the next.

Table 5.15: College Two Non-Focus Group Faculty's Highest Scored "Culture of Evidence" Survey Items

Survey Item	Average
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	3.61
4b. The institution regularly collects, analyzes, and reports data pertaining to the following: Developmental students' success in entry-level college courses	3.61
4c. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of selected gatekeeper courses	3.61
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful course completion for all courses (C or better)	3. 61
4e. The institution regularly collects, analyzes, and reports data pertaining to the following: Student persistence—re-enrollment from one term to the next	3.44

Comparison of Results from Non-Achieving the Dream Participants

There was very little variance in the overall responses of all five respondent groups at College Two not directly involved in the Achieving the Dream initiative. All five groups perceived that multiple characteristics of a "culture of evidence" existed at a partial level of implementation at the college, with overall average scores falling into a range of .30 points.

There was also a high level of commonality among the survey items rated highly by the five respondent groups, and all but one item was found more than once among the different lists. Four groups were most confident in the college's routine collection, analysis, and reporting of student data pertaining to successful student completion of developmental courses. At least three of the groups perceived the college had also made considerable progress in the collection, analysis, and reporting of data on the rate of successful course completion for all courses, student persistence, and the completion of certificates and associate degrees.

Comparison of Results from Non-Achieving the Dream & Achieving the Dream Participants

As with the results from the respondent groups not directly involved in Achieving the Dream at College Two, there was little variance in the responses between these groups and the responses from participants in the college's Core Team and Participants focus groups. In fact, the overall average survey scores of the Core Team (3.13) and Participants group (3.33) fell within the range of responses from the non-Achieving the Dream respondent groups. This shows a high level of agreement in the perceptions of all employees at the college regarding the development of a data-driven culture.

The survey items rated the highest by all respondent groups—non-Achieving the Dream and Achieving the Dream participants—were also very similar. Only four survey items listed did not appear on the list of more than one group, and all four of these unduplicated survey items occurred on the Achieving the Dream Participants' list of highest rated items along with multiple duplicated items. All groups except the faculty focus group perceived the college had made progress in implementing the routine collection, analysis, and reporting of student data relating to successful course completion in developmental courses. Five groups reported a high level of implementation at the college of the collection, analysis, and reporting of the rate of successful completion of all courses and student persistence from one term to the next. Finally, four groups perceived notable levels of implementation of the collection, analysis, and reporting of data on completion of certificates and degrees, as well as the use of assessment data by the institution to inform the development of institutional strategic priorities.

Comparison of Perceptions of Both Colleges

A distinct difference in perceptions of the presence of a "culture of evidence" at College One existed between college employees directly involved in the college's Achieving the Dream work and those employees not directly involved in the initiative. Members of the Core and Data perceived a greater level of implementation of a data-driven institutional culture than their counterparts across the college. On the other hand, a common perception of the presence of a "culture of evidence" at College Two was shared among all employee response groups. At both colleges, most of the employee respondents reported that a data-driven culture had only been partially implemented at each institution.

While the ranges of average responses were different at each college, similarities existed between colleges as to how high or low survey items were rated. Both colleges felt that the most established characteristics of a data-driven culture at their institutions were the college's routine collection, analysis, and reporting of student data on successful completion of all courses (specifically developmental courses) and the completion of certificates and associate degrees. On the other hand, both colleges felt that less progress had been made at the institutions in routinely disaggregating and reporting data by student income level, using assessment data to inform the development of faculty and staff development activities, and create an environment in which beliefs and assertions about "what works" are evidence-based.

Table 5.16: Highest and Lowest Rated Survey Items Shared by both Colleges—All 14 Respondent Groups

Highest Rated Survey Items	**COLLEGE ONE**	**COLLEGE TWO**
4a. The institution regularly collects, analyzes, and reports data pertaining to the following: Successful completion of remedial/developmental courses	3.08	3.71
4d. The institution regularly collects, analyzes, and reports data pertaining to the following: Rate of successful completion for all courses (C or better)	3.27	3.51
4f. The institution regularly collects, analyzes, and reports data pertaining to the following: Completion of certificates and associate degrees	3.23	3.49
Lowest Rated Survey Item		**Average**
5c. Data depicting student persistence, learning, and attainment are routinely disaggregated and reported by student characteristics, including: Student income level	2.49	2.40
7c. The results of student and institutional assessments are used routinely to inform institutional decisions regarding: Faculty and staff development	2.55	3.08
8. Beliefs and assertions about "what works" in promoting student learning and attainment are evidence-based.	2.78	2.84

NON-ACHIEVING THE DREAM STAFF AND FACULTY PERCEPTIONS OF INSTITUTIONAL CHARACTERISTICS

The last research focus of this study was to see the extent to which the perceptions of institutional characteristics identified by members of each college's Achieving the Dream Core and Data team had permeated the perceptions of other faculty and staff at the institution not directly involved in the initiative. In the staff and faculty focus group sessions, the themes that had been identified by participants from each college's Core and Data teams were presented at the beginning of the meeting as "themes identified by other administrators, faculty and staff in community colleges." The staff and faculty participants were invited to consider these themes as they brainstormed affinity groups central to the institution's efforts to become culturally data-driven and organized the groups according to perceived interrelationships. The resulting affinity groups were then

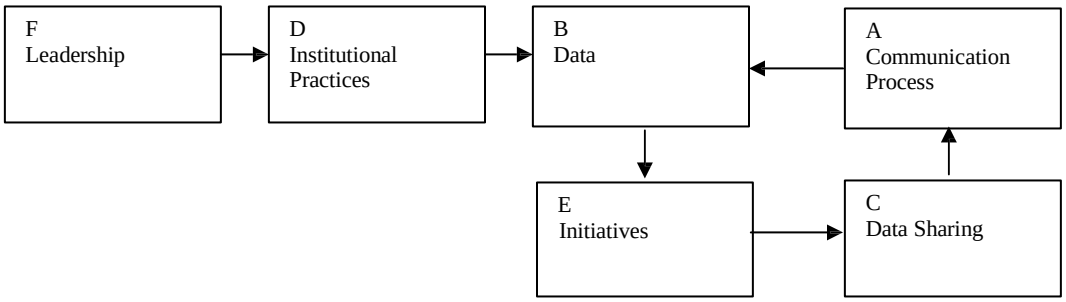
compared to the results from the Core and Data Team focus groups to see which themes were common to multiple participant groups.

College One

College One Staff Focus Group Affinities

Participants in College One's staff focus group identified six themes they perceived to be central to the college's commitment to developing and maintaining a "culture of evidence." These affinities included *Leadership, Institutional Practices, Data, Initiatives, Communication Process,* and *Data Sharing.* Leadership was seen as the primary driver of all of the components of a "culture of evidence." The president and executive team were seen as determining institutional practices—planning processes and accreditation work—which impacted which data were collected and in which initiatives the college participated. Involvement in specific initiatives, like Achieving the Dream, was seen as driving what and how data were shared at the college and the general communication process. However, the staff participants perceived a cyclical relationship between the last four affinities, with the communication process informing data collected, and thereby influencing initiatives and data sharing.

Figure 5.05: College One Staff Focus Group Affinity Relationship Figure (ARD)



SUMMARY OF RELATIONSHIPS:

Leadership drives institutional practices, which drive data, initiatives, data sharing, and the communication process. However, a circle is formed in that the communication process informs the data, which in turn informs initiatives, data sharing, and again the communication process. While leadership also drives initiatives, there is no strong relationship between initiatives and institutional practices.

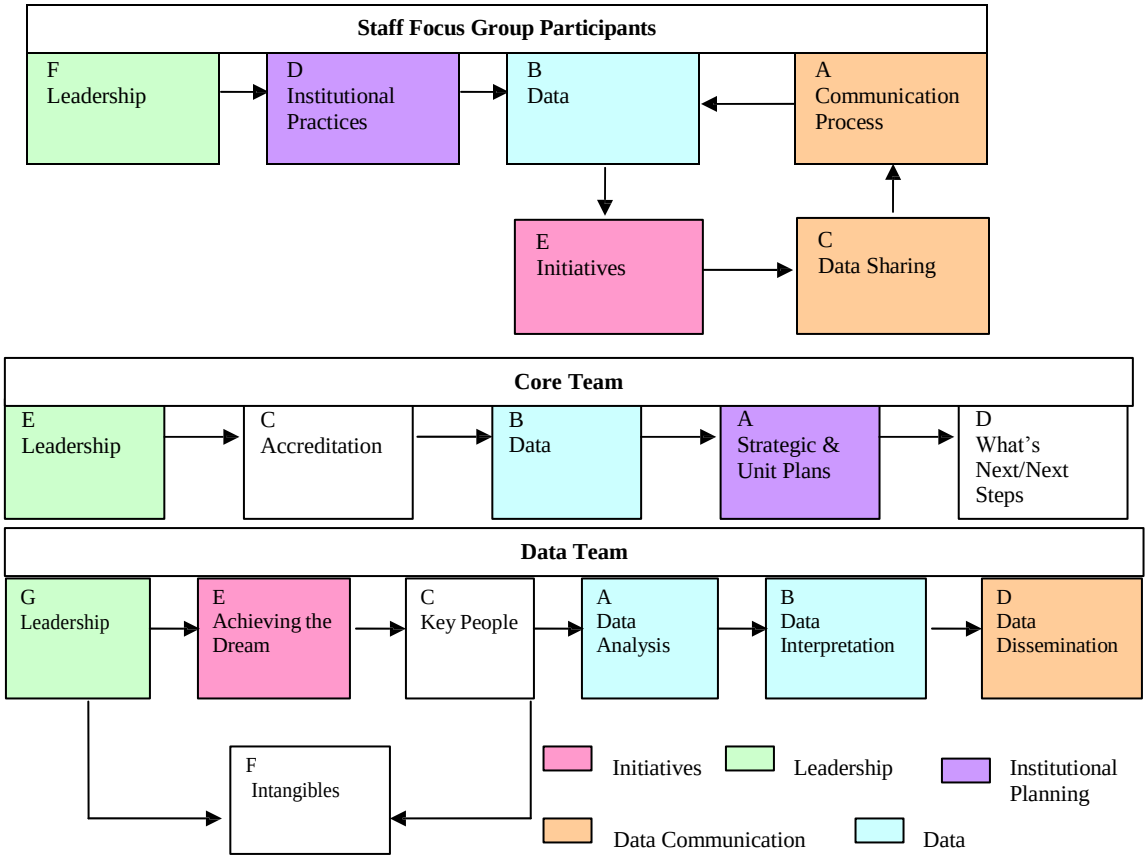
Comparison of Staff Responses to Core and Data Team Responses

Many similarities exist between the affinity groups and their perceived interrelationships identified by the staff focus group participants and the participants in the College One's Core and Data Team focus groups. First, participants from all three focus groups perceived leadership—specifically the college's president—to be the primary driver of the institution's data-driven efforts. Second, all three groups identified the collection and analysis of data as an intermediary step in the process, though the Data Team participants delineated between data analysis and interpretation while the other two groups lumped all of these aspects into one "data" affinity group. Third, both the Data Team and staff participants saw the communication of data to be the end product of the process, though the staff group identified two affinities—*Data Sharing* and *Communication Process*—which implied more communication effort than just data

dissemination. Finally, the last two affinities from the staff focus group results—*Institutional Practices* and *Initiatives*—appeared in the results of either the Core Team or Data Team focus groups as well.

The most significant difference in the perceptions of the staff focus group participants as compared to the perceptions of the Core and Data Team groups pertained to the influence of external forces. While the Core and Data Team groups both recognized external factors (accreditation and initiatives) to be secondary drivers in the development of a "culture of evidence," the staff participants saw these initiatives as having far less influence on the process, being only an intermediary step between the college's efforts and its data communication process. On the other hand, the staff participants believed the college's strategic planning structure acted as a secondary driver in promoting the use of data, while the Core Team identified strategic planning as being an outcome of the process and not a driver. The staff team did mention accreditation in its secondary driver affinity, but the staff emphasized the internal response to accreditation rather than the external requirements of the accrediting process. Thus, the staff participants felt the locus of control in becoming data-driven was internal by nature, while the Core and Data team groups recognized external forces as significant influencers.

Figure 5.06: Comparison of College One Staff Focus Group Affinity Relationship Figure (ARD) to College One Core and Data Team ARDs

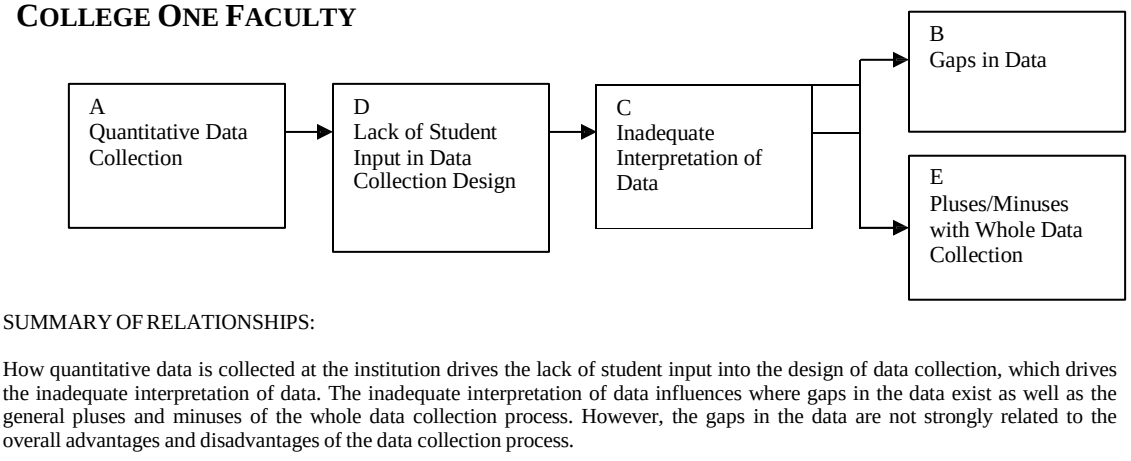


College One Faculty Focus Group Affinities

Five affinity groups emerged during College One's faculty focus group session: *Quantitative Data Collection, Lack of Student Input in Data Collection Design, Inadequate Interpretation of Data, Gaps in Data,* and *Pluses/Minuses with Whole Data Collection Effort.* The faculty participants believed how quantitative data were collected at the institution created a lack of student input into the design of data collection, which

in turn drove the inadequate interpretation of the data collected. Their view was that without student involvement in determining which data were collected, the results of collected data would be skewed in the interests of the college and would misrepresent student needs. The inadequate interpretation of data was seen to influence where gaps in the data existed as well as the general pluses and minuses of the whole data collection process. However, the faculty perceived that gaps in the data were not strongly related to the overall advantages and disadvantages of the data collection process—gaps were seen as controllable by the efforts of the college and not a natural byproduct of becoming data-driven.

Figure 5.07: College Two Faculty Focus Group Affinity Relationship Figure (ARD)

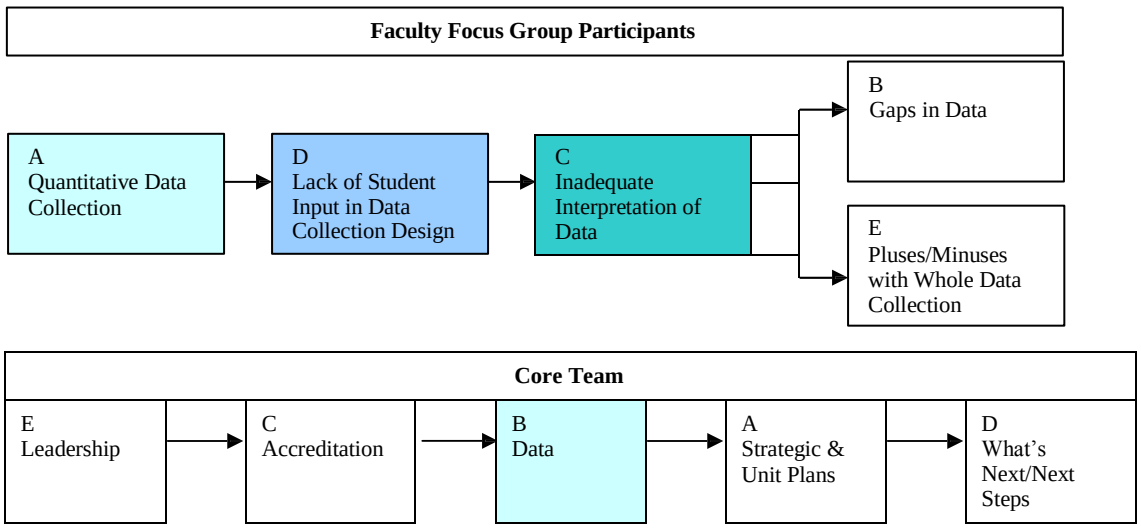


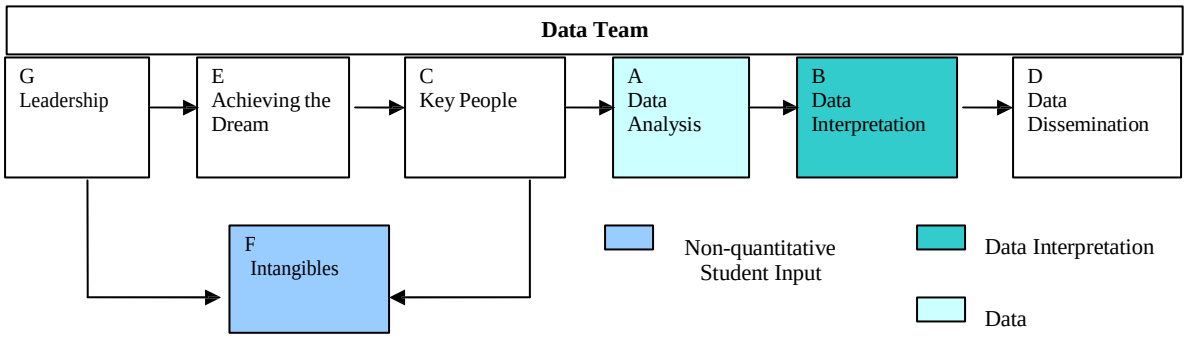
Comparison of Faculty Responses to Core and Data Team Responses

Unlike the responses from the staff focus group, few similarities existed between the responses from the faculty focus group and the results of the Core and Data Team

focus group sessions. While all three groups identified the collection of data as an important theme, the faculty participants saw data collection as the primary driver of becoming a data-driven institution, while the Core and Data Team participants placed data collection as an intermediate step in the process. The Data Team group recognized, like the faculty group, that some important student information was not captured in the quantitative data collection process, but they perceived the lack of information to be tangentially connected unlike the faculty group, who felt the lack of this information (as supplied by students) was the secondary driver—or impediment—in the college's efforts to develop a "culture of evidence." Finally, both the Data Team group and the faculty group mentioned data interpretation as an important theme, though again the faculty group saw this effort to be inadequate with little to no faculty involvement, whereas the Data Team group believed the efforts of the Institutional Research Office in interpreting data to be highly effective.

Figure 5.08: Comparison of College One Faculty Focus Group Affinity Relationship Figure (ARD) to College One Core and Data Team ARDs





Comparison of Responses from All College One Focus Groups

The perceptions of College One's Core and Data Team participants were heavily reflected in the responses of the staff focus group but not in the responses of the faculty focus group. The two Achieving the Dream groups and the staff group perceived the institution's leaders to be driving the move towards a data-driven environment, while the faculty saw the actual data collected as being the main impetus of all of the college efforts without a connection to the larger processes at the college. The faculty group was the only group to mention the role (or lack thereof) of student involvement, and it was the only group to question the value of creating a "culture of evidence," being unconvinced that the general advantages of such a culture would outweigh the associated disadvantages. Both the staff and the faculty groups perceived the cultural shifts to be internally driven, while the Core and Data Team participants noted the influence of external forces on the college's efforts. An emphasis on internal locus of control was also noted in the perceptions of the college's president.

It would appear that staff members at the college were more likely to espouse the components of a "culture of evidence" as defined by the college's president and Achieving the Dream teams. Faculty, on the other hand, were less convinced of the value

of a "culture of evidence" and questioned the role students and faculty (in the interpretation of data) played in the process. It is interesting to note that the president specifically identified the need to build trust with faculty and staff regarding the use of data, and she emphasized the influence of faculty on whether or not a "culture of evidence" was adopted by the institution. In view of the results from the focus groups, the hesitancy of the faculty participants in adopting the Core and Data team's perceptions of a "culture of evidence" could be limiting the full implementation of such a culture at the college.

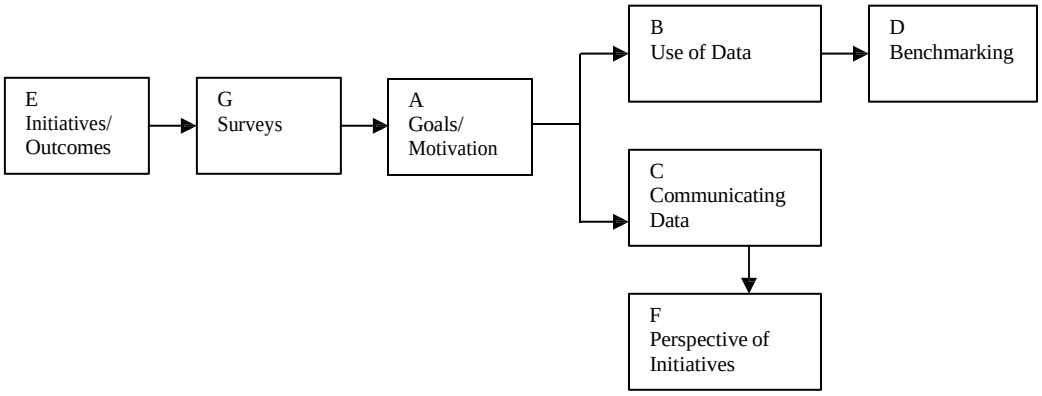
College Two

College Two Staff Focus Group Affinities

Participants in College Two's staff focus group identified seven themes directly associated with the college's efforts to develop a "culture of evidence." These groups included: *Initiatives/Outcomes, Surveys, Goals/Motivation, Use of Data, Communicating Data, Benchmarking* and *Perspective of Initiatives*. The staff participants perceived the many initiatives adopted by the college—including Achieving the Dream—to be the primary drivers of the college's move to become fully data-driven. These initiatives determined which data collection tools would be used (typically surveys), and the results of these surveys set the goals and motivation for the institution. These goals and motivations drove the use of data and how data were communicated, which the staff participants believed were not strongly related to each other. The use of data at the college was seen as determining how benchmarking was used by the college, and how data were communicated influenced the perspectives different groups at the institution

had of the initiatives. The perspectives of college constituents regarding the initiatives (the primary driver) were seen as the end outcome of the process.

Figure 5.09: College Two Staff Focus Group Affinity Relationship Figure (ARD)



SUMMARY OF RELATIONSHIPS:

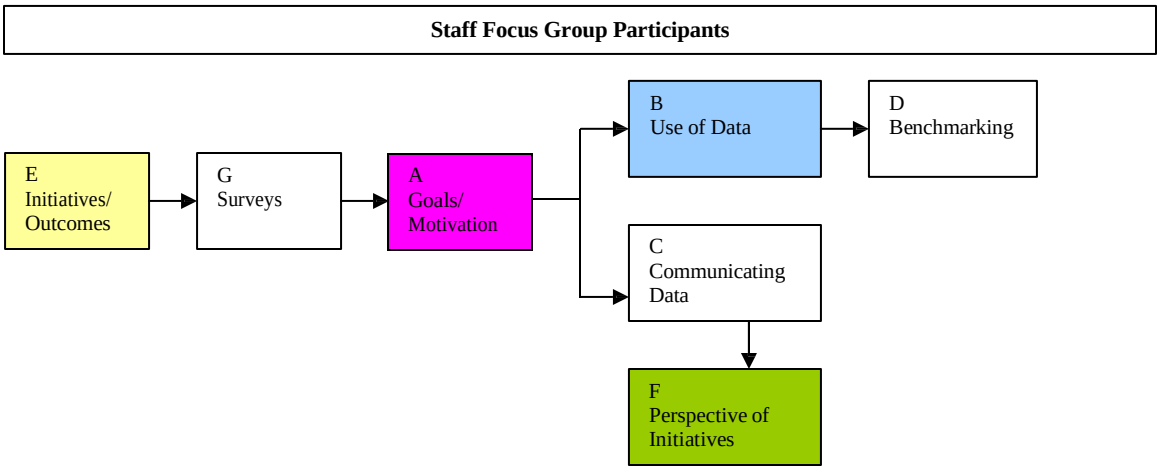
Initiatives and their outcomes drive the surveys used at the college, which in turn set the goals and motivation for the institution. These goals and motivations drive the use of data and how data is communicated, which are not strongly related to each other. The use of data determines how benchmarking is used by the college, and how the data is communicated influences the perspectives different groups at the institution have of the initiatives.

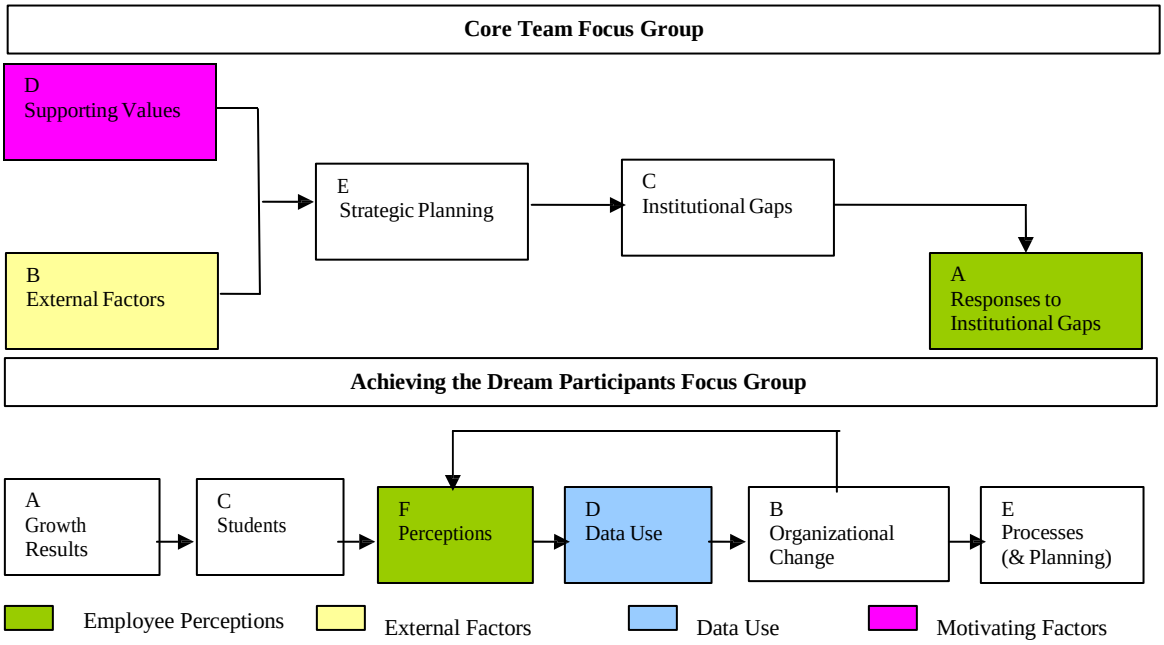
Comparison of Staff Responses to Core and Data Team Responses

Only one theme emerged in the affinity groups of College One's Core and Achieving the Dream Participants focus groups and the staff focus group: employee perceptions. The Core Team group and the staff group both perceived employee perceptions to be an end outcome of the process, though the staff group focused on employee perceptions of the initiatives while the Core Team group highlighted employee perceptions as they related to institutional gaps uncovered by the use of data. The Achieving the Dream Participants group saw employee perceptions of external forces as an intermediary step that led to the use of data. Three other affinities were shared

between two of the groups, as well. The staff group and the Core Team group both perceived external factors (including initiatives) as a primary driver of the development of a data-driven culture. The two groups also identified institutional motivations as a key component of the process, but their perceptions differed in the type and influence of motivators. The Core Team group identified the institution's value statements and mission as primary drivers of the college efforts, while the staff group believed institutional goal and motivation developed in response to the findings of survey instruments and were only an intermediate step leading to the use and communication of data. The staff group shared the common theme of *Use of Data* with the Achieving the Dream Participants group, and both groups saw data usage as a middle step in the process.

Figure 5.10: Comparison of College Two Staff Focus Group Affinity Relationship Figure (ARD) to College Two Core and Data Team ARDs

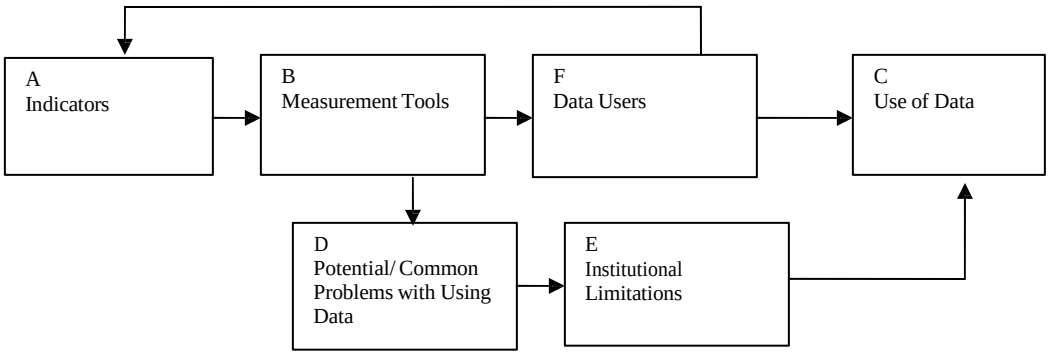




College Two Faculty Focus Group Affinities

The members of the College One faculty focus group identified six themes related to the college's efforts to create a data-driven culture: *Indicators, Measurement Tools, Data Users, Potential/Common Problems with Using Data, Use of Data,* and *Institutional Limitations.* Indicators included the many different types of data that were collected by the institution, and these data sources determined what measurement tools were used by the college. The results of the measurement tools influenced who used the data and how their use impacted college constituents, particularly faculty members. However, the measurement tools used perpetuated common problems with using data due to inherent biases and gaps in data the tools collected. These common problems influenced institutional limitations in using data.

Figure 5.11: College Two Faculty Focus Group Affinity Relationship Figure (ARD)



SUMMARY OF RELATIONSHIPS:

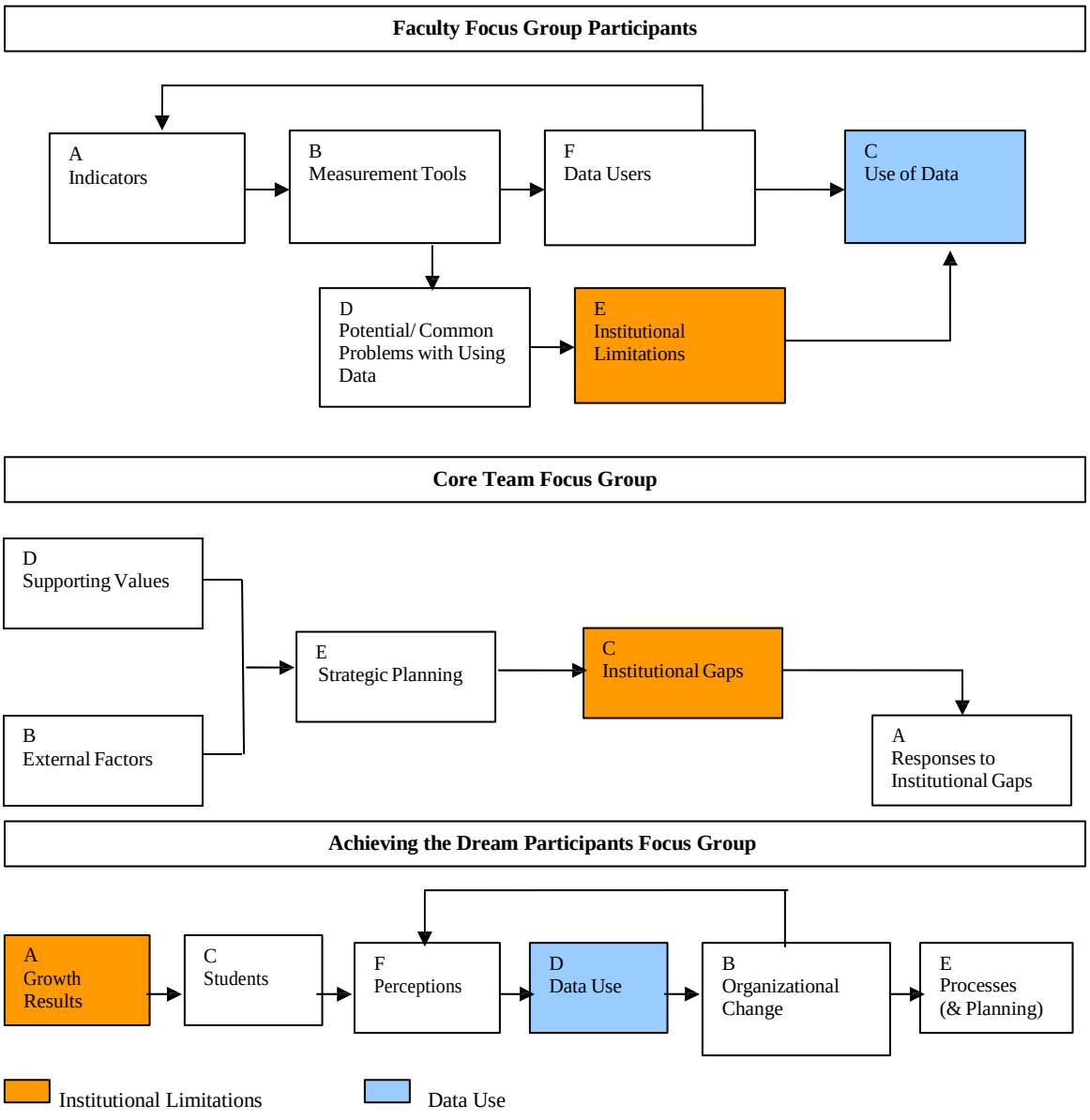
What is measured drives the tools used to measure, which in turn influences who collects and compiles the data (the data users). The data users then influence what is measured and how the data is used. The measurement tools perpetuate commons problems with using data, which in turn influences institutional limitations in using data. Data users also influence institutional limitations, and institutional characteristics influence how data is used.

Comparison of Faculty Responses to Core and Data Team Responses

There was very little similarity between the results from the faculty focus group and the results from the Core Team and Achieving the Dream Participants focus group sessions. Only one theme was common among the responses of all three groups, and that was the significance of institutional limitations in meeting the needs of students. The Achieving the Dream Participants group perceived the limitations were linked to the recent growth in student enrollment at the college, which was the primary driver of the entire data-driven process. The Core Team group and the faculty group both placed institutional limitations near the end of the process as secondary outcomes, either driven by common problems with using data (faculty) or by the strategic planning process at the institution (Core Team). The only other shared affinity occurred between the faculty group and the Achieving the Dream Participants group. The affinity was *Use of Data*, and

while both groups noted the role of applying data in decision-making and planning activities, the faculty group perceived the use of data to be the ultimate end result of the process while the Achieving the Dream Participants group labeled it an intermediate step leading to organizational change.

Figure 5.12: Comparison of College Two Faculty Focus Group Affinity Relationship Figure (ARD) to College Two Core and Data Team ARDs



Comparison of Responses from All College Two Focus Groups

When compared to the Affinity Relationship Figures (ARDs) from the staff and faculty focus groups, the figures from the Core Team and the Achieving the Dream Participants focus groups appear very linear and simplistic in nature. Participants in the faculty group perceived many of their affinities to exist in cyclical relationships, and the staff group believed only weak relationships existed between half of their affinities. This means that it is less clear to the staff and faculty participants how components of the college's "culture of evidence" development are meant to interact. Not a single affinity appeared in all four groups' lists, and few affinities were common between the faculty and staff groups and one of the Achieving the Dream groups. Again, this would suggest that the perceptions of the Core Team and Achieving the Dream Participants groups had not permeated the perceptions of other staff and faculty participants at the college.

Three of the focus groups perceived that external forces were primary drivers of the work of the college. For the Achieving the Dream Participants group, the external force was growing enrollment; for the Core Team group the external force was growing enrollment, the Achieving the Dream initiative, and the district office; and for the staff group it was the many college initiatives, including Achieving the Dream. The faculty group didn't mention any larger force driving the development of a "culture of evidence," and instead only spoke of the process as if it were isolated, beginning with indicators to measure and ending with the use of data to inform decisions and planning. Only the Core Team group and the college's president labeled the college's institutional mission and values as primary drivers of the college's efforts. The president, though, did mention the importance of the college's drawing upon external entities to assist in institutional

reflection, such as through benchmarking with other institutions and involvement in continuous improvement consortia. Still, more than half of the groups attributed the locus of control to being outside of the institution instead of within it.

Comparison of Affinity Results from Both Colleges

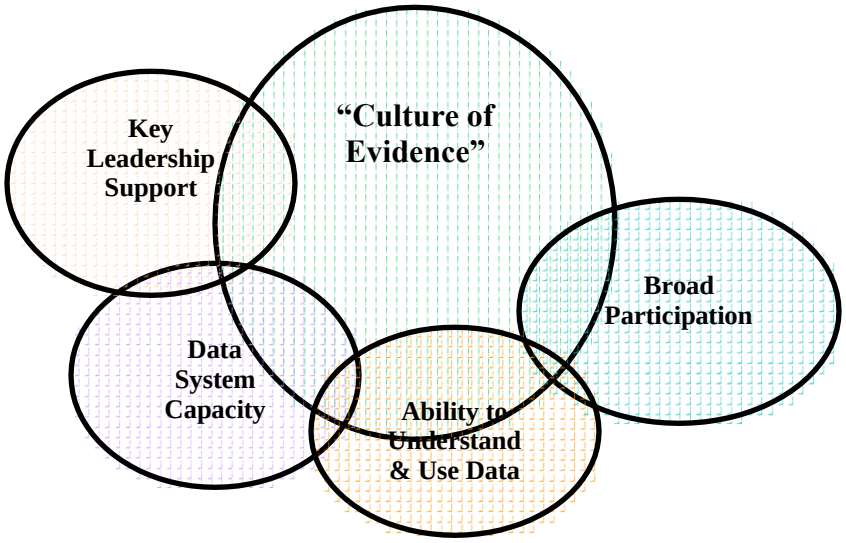
Again, the focus group participants at both colleges identified external factors that influenced the efforts of the colleges to establish data-driven environments, while the presidents at both institutions felt the locus of control existed entirely internally. This means that both presidents still believed they had more control on the outcomes of the institution than focus group participants—Achieving the Dream and non-Achieving the Dream participants alike—felt was possible. The greatest difference in perceptions occurred between the Achieving the Dream participants and the faculty groups. Both faculty groups described the components of a data-driven culture in isolation, each starting with the collection of data and ending with its use without context to the work of the larger institution. Faculty participants were also less convinced of the validity of quantitative data on students and did not see the use of data as core to their responsibilities at the institution. Even when looking at staff and faculty participants, the respondents at College One were more likely to focus on the data in data processes, while the respondents at College Two were more likely to list initiatives and surveys employed at the college and emphasize employee perceptions and responses. This difference was reflected in the responses of each college's president, as well. For example, the president of College One mentioned specific examples of data and highlighted linear processes

implemented at the college, while the president of College Two identified multiple themes related to making data approachable and well perceived by college constituents.

PARTICIPANTS' PERCEPTIONS OF A "CULTURE OF EVIDENCE" AND THE THEORETICAL FRAMEWORK

In developing the structure of this study, a theoretical model was created by drawing upon concepts prominent in the literature on data-driven educational systems. These concepts included key leadership, data system capacity, broad participation, and organizational members' understanding of and capacity to use data. In order to measure the validity of a model based upon these concepts, the responses of the participants in the eight focus groups were reviewed to see the extent to which these responses were present in the perceptions of the participants. This section will explore each of the four main concepts from the model in relation to the affinity groups identified by the focus groups and will then discuss the validity of the model as a whole.

Figure 5.13: A Theoretical Model of a "Culture of Evidence"



Key Leadership Support

The support of key leadership in the development of any transformational cultural or institutional change was identified as critical in the literature, and it was assumed it would thereby also manifest itself in the perceptions of administrators, faculty, and staff involved in the process of creating a "culture of evidence." The literature was specifically examined in its discussion of leadership within a cognitivist framework. By approaching leadership as a traditional cognitive organizational activity, key individuals, such as institutional leaders, were seen as critical in adjusting symbols and artifacts and making the meaning of these objects clear to all constituents. A cognitivist approach also emphasized the importance of institutional symbols, including mission, vision, and values statements.

The theme of key leaders was very evident in the responses of participants from College One. Three of the four groups identified leadership as an affinity group, and each specifically discussed the role of the college president in establishing the work of the institution in becoming data-driven. Only the faculty group failed to list leadership as a key affinity group. The Data Team group also mentioned the role of two administrators in the Institutional Research Office in explaining the college's success in implementing a data-driven culture. While the role of executive leaders wasn't captured in the affinities of the College Two focus groups, symbols relative to a cognitivist approach were. The Core Team group identified the college's mission and values as driving the efforts of the institution in creating a data-driven climate, while the staff group spoke of how a lack of clear symbols—institutional mission and vision—led to limited success in defining the true nature of a data-driven culture.

Data System Capacity

In the literature discussed in chapter 2, "data system capacity" was defined as the resources and knowledge possessed by and available to the institution to measure student progress and success. Both the Core and Data Team groups at College One highlighted concerns about data capacity at the institution. The Core Team group discussed the importance of developing capacity at the college that would allow the institution to be self-sufficient in data collection and analysis and not dependent upon the district office for data knowledge and resources. The Core Team group also mentioned the importance of creating automated systems and increasing staffing in the Institutional Research Office. The college's Data Team group noted the importance of analytical skill and

increased data collection capacity needed by the Institutional Research Office. Neither group directly discussed the college's current capacity to collect, analyze, present, and disseminate data findings. Also interestingly, while both groups commissioned by the Achieving the Dream initiative to develop a "culture of evidence" identified the significance of the college's data system capacity, neither of the two non-Achieving the Dream focus groups mentioned data system capacity as an important component.

Similar to College One, the two Achieving the Dream focus groups at College Two also identified data system capacity as an important components in the development of a data-driven culture at their institution. As with College One's Core Team group, College Two's Core Team group identified the college's reliance on the district's data systems as hindering the institution's ability to collect and analyze data in a timely manner. However, the group confessed that the institution lacked the personnel in the Institutional Research Office to independently extract and analyze data. The Achieving the Dream Participant's group also mentioned the struggle with the college to gather and disseminate data findings in a timely manner due to the role of the district office in the process. With both of these groups, data systems capacity was placed within a broader affinity group and was not identified as a main theme. Also similar to College One was the fact that data systems capacity was only mentioned by Achieving the Dream focus groups and not by non-Achieving the Dream focus groups.

Broad Participation

Of all of the components discussed in the literature, "broad participation" was the most frequently mentioned by participants in the eight focus groups. Three groups at

College One identified affinities reflective of a belief that participation by a larger collection of people at the college was an integral part of success in developing a data-driven culture. College One's staff and faculty focus group created two affinities linked to greater participation at the college, and its Data Team focus group identified one affinity. The staff and Data Team focus group affinities were directly related to communication—that is, the extent to which data and data findings were communicated or made accessible to constituents across the college. In these instances, participation was seen as being directly dependent upon the extent to which information was disseminated. On the other hand, the faculty focus group's affinities emphasized input from different constituent groups: one affinity noted a lack of student input in the design of data collection at the college, while the other affinity questioned the adequacy of data interpretation since faculty involvement in the process was limited.

Three of the focus groups at College Two also identified broad participation as part of their efforts to become data-driven. Again, "participation" was primarily defined by these focus group participants as meaning "communication." The staff group lamented a perceived inconsistency in the availability of data, limiting their involvement in the initiative. The faculty group, on the other hand, complained about the amount of data disseminated for them to review. Both the faculty group and the Achieving the Dream Participants group also mentioned participation as being more involvement than mere communication, with the Participants group questioning the role of students in the process and faculty wanting more of a role in the interpretation of data.

Organization Members' Ability to Understand and Use Data

The theme of the ability of an organization's members to understand and use data was the least discussed theoretical component of all four parts of the theoretical model. In fact, only one of the focus groups mentioned the component in passing. Under the title of *Institutional Gaps*, College Two's Core Team group noted that a general inexperience (or "lack of maturity") of many employees at the college with using data was a barrier to cultural change. College Two's president also focused specifically on employees' understanding and use of data in her interview, with one theme from the discussion highlighting the importance to make data "usable." To this end, the president encouraged training staff on how to use data, the simplification of data collection and analysis, and the use of benchmarking to provide context for data findings. The components of this theme, though, were only reflected in the one comment made by the Core Team group and not by any of the other focus groups. Discussion of an organization's members' ability to understand and use data appeared nowhere in the results from the four focus groups held at College One.

Reflection of Theoretical Model in Research Findings

The components of the theoretical model posited through a study of the literature were only somewhat reflected in the responses of the participants of the focus groups at both colleges. The majority of participant groups identified leadership (defined through a cognitivist lens) as being critical in the implementation of cultural change at the college. Broad participation was also widely recognized as a critical component of the institution's transformation. Only participants of focus groups associated with Achieving

the Dream were cognizant of the importance of data systems capacity, and their responses were limited in their breadth of the concept. It would appear that this component was outside the general perceptions of participants at the college and either required advanced knowledge of data systems-more likely to possessed by administrators and professional staff than general staff and faculty members, or emerged through being given responsibility to implement data system models. The concept of organizational members' holding a general understanding of data and their use was also underrepresented in the responses of the focus groups, with one focus group and college president noting its significance. Similar to the literature, focus group participants expressed a need for faculty and staff to be involved in different aspects of data collection and analysis but undervalued the importance of these constituents having the knowledge and skills to use the data.

These findings indicate that general components defined in the literature as being important in producing institutional cultural change are useful in understanding the perceptions employees hold toward the development of a "culture of evidence." Employees involved in the process of creating data-driven environments perceived key leadership support, structured and independent data systems, and broad participation to be important aspects of influencing data-driven cultural change. The only component barely reflected in the responses of participants was the need for institutional members to have a basic understanding and ability to use data to inform decision-making and planning processes. However, this component was also undercited in the literature. Further research would better describe how important this concept is to the development of true data-driven cultures.

LESSONS LEARNED

Effectiveness of Targeted External Forces

During the first year of the grant, the Achieving the Dream initiative requires participating colleges to measure and report on five indicators of student performance: successful completion of all courses, including developmental education and gatekeeper courses, persistence from term-to-term, and completion of certificates and degrees. Not surprisingly, the collection, analysis, and reporting of these five indicators were perceived by all respondents to be the most established component of a "culture of evidence" at each institution. This shows that, at least to some extent, strategically focused external forces can influence the reliance of an institution's culture on data.

Emphasis of Main Components in Development of Culture

That said, it appears that institutional culture predominantly remains internally driven, and the adoption of a "culture of evidence" varies from institution to institution. In the two colleges studied, participants perceived a different emphasis at each college as to the development of a data-driven culture. At College One, focus group participants identified executive leadership and data capacity as two main components of their "culture of evidence." The focus groups identified the college president and the executive staff as being instrumental in guiding the work of the initiative. Participants were also able to clearly articulate key indicators of student performance and could differentiate between the stages of collection, analysis, and reporting of data. However, participants in the non-Achieving the Dream focus groups reported a lack of involvement in the analysis

and interpretation of data, and the staff group questioned how much "data communication" at the college was really "data dissemination" without discussion. Communication from the Achieving the Dream teams to the non-Achieving the Dream groups was apparent, especially with the staff group, all of whose generated affinities corresponded to affinities identified by the Achieving the Dream focus groups. Not surprisingly, the Core Team group perceived a "culture of evidence" to be fully implemented at the college, while non-Achieving the Dream groups believed such a culture was only partially implemented. With the heavy involvement of the executive team in the effort and the perceived limited involvement of others at the college, it makes sense that a notable difference would exist in the perceptions of the Core Team and non-Achieving the Dream focus group respondents regarding the level of implementation of a data-driven culture at the institution.

On the other hand, participants at College Two perceived broad participation to be the underlying component of the development of a data-driven culture at their institution. Participants were very accustomed to involvement in committees and discussions about initiatives and culture and were even more open to participation in this study than their counterparts at College One. In fact, there was consensus among participants in the four focus groups and other staff who responded to the survey that a "culture of evidence" was partially implemented at the college. This consensus in perception speaks to a strong internal communication structure and broad involvement in discussions regarding the work of the college. However, all of the groups noted a level of disinterest in their involvement, which they linked to a feeling a limited resources being "stretched thin." In addition, two of the focus groups mentioned confusion existed regarding the many

different initiatives and strategies used by the college, and one group perceived that the many initiatives actually determined the mission and priorities of the college instead of the institution's values and mission statement. Unlike participants at College One, respondents from College Two didn't identify the role of the president as a main proponent of creating a data-driven environment, and instead all four groups attributed some level of control and influence to external forces, such as the district office, community needs, and the many adopted initiatives and measurement tools.

Upon reflection, it appears that key leadership, data systems capacity, and broad participation must be emphasized together to successfully develop an institutional "culture of evidence." While College One was successful in distinguishing leadership support and data system capacities, it struggled to promote broad involvement in the process. Consequently, the college president identified a lack of "innovation" in the college's response to collected data. College Two emphasized involvement and a sense of "shared governance" above all other components of a "culture of evidence. This in turn overshadowed a focus on data system capacity—which was rapidly changing as the college increased student enrollment—and college leadership. It is important to note that participants did not perceive a lack of leadership: each group provided anecdotal accounts of how the president embodied the commitment and involvement at the core of the institutional culture. A clear connection, though, was not established by participants between the purpose and focus of creating a data-driven culture and the work of the president. At both colleges, all three of these components—leadership, data system capacity, and broad participation—existed. Therefore, it is not the existence of these

components that mattered as much as it was the emphasis, and thereby attention, given to each characteristic.

Involvement of Faculty

At both colleges, faculty was the group least likely to perceive a "culture of evidence" existing at the institution. The faculty participants were also the only constituent group to describe a data-driven environment as a separate entity without connection to the larger mission of the college. In addition, half of the participants in the faculty focus groups reported having little to no experience with statistical analysis, and faculty members in general reported using data less frequently in accomplishing their daily tasks. Thus, faculty were less engaged in the development of a "culture of evidence" and less prepared to participate in data-driven efforts.

Both college presidents noted the importance of faculty involvement in the process of creating a data-driven culture. One president even framed faculty involvement as a barrier to data-driven processes at the institution. With the critical role faculty play in the mission of the community college, it seems unlikely that college administrators will be able to ignore the influence of faculty and still transform the institution's culture. Instead of approaching faculty as a hindrance to data-driven transformation, faculty need to be brought into the core of the initiative's work. For faculty participants, this means participation not only in the collection and dissemination of data but also in the interpretation of data collected on student and institutional performance. At both colleges, faculty implied that less, more targeted data collection, analysis, and dissemination was

more valuable than constantly increasing the more general amount of data collected and communicated to the institution.

Need for Training

Finally, although one president mentioned the importance of providing professional development opportunities for faculty, staff, and administrators to become more comfortable with using and understanding data, training was not mentioned as an important affinity of data-driven change by any of the focus groups at both colleges. Instead, there seemed to exist a belief that all employees were equally capable of understanding and using data in their daily tasks. In reality, focus group participants reported varying levels of exposure to statistical analysis and varying levels of frequency of data usage in accomplishing daily tasks. There were also clear differences in the depth of understanding and complexity of the use of data at the college in the difference affinities identified by focus groups at each institution. Thus, the belief that all employees were equally capable of using and understanding data was incongruent with the reported experiences of participants.

At both colleges, faculty and staff members were typically involved in the collection and communication aspects of data usage. However, even in these aspects their participation was limited. At College Two, participants noted that all of the measurement tools used by the college were pre-designed by external organizations, and only the institutional research office participated in the design and development of data collection. Focus group participants at College Two saw their role in data collection as merely providing prescribed data sets to the administration, not deciding what should be

measured. Non-Achieving the Dream focus group participants at College One also indicated having a passive role in data collection design. These participants perceived their role in the communication of data as passive, as well, and the staff group even noted that data communication was limited to what administrators felt individuals needed and not to what employees requested. Thus, in order for the colleges to truly create a data-driven culture, faculty and staff needed to be involved in active roles in the collection, analysis, and communication of data, and this will require skills and knowledge that faculty and staff as of yet have not needed. As the roles of faculty and staff change, though, the institution must remain conscious of not overwhelming employees with time-intensive and complex data processes, but instead find ways to make all employees active partners in targeted ways in the development of an institutional "culture of evidence."

Summary

In summary, by examining the perceptions of faculty, administrators, and staff in the development of a "culture of evidence" at two institutions, many lessons can be learned that might be applicable to other colleges attempting to developing similar data-driven cultures. These lessons include:

- Targeted external forces, such as participation in the Achieving the Dream initiative, can have positive impact on the development of a data-driven culture.
- The concepts of key leadership, data systems capacity, and broad participation are all important to the development of a "culture of evidence," and all three concepts need to be emphasized—and not just present—in the planning and implementation efforts of an institution.

- Faculty—the constituent group least likely to perceive the existence of and be involved in a data-driven culture—need to be strategically included in the different stages of data collection, interpretation, and communication, though this participation should be targeted and sensitive to existing workloads.
- All employees should be encouraged to take strategically targeted "active" roles in data collection, analysis, and communication, instead of fulfilling passive roles of merely reporting data and waiting for results to be disseminated.
- Not all employees are equally able to understand and use data, and training is needed to provide faculty, administrators, and staff with the skills they need to use data more frequently in accomplishing their daily tasks.

LIMITATIONS OF STUDY

The following limitations apply to the interpretation of the study. First, with the study focusing on only two colleges, the generalizability of the findings are limited. Second, while the components of the theoretical model—key leadership, data systems capacity, and broad participation—were successful components of the work at the two colleges, not one college emphasized all three components, and so it is unclear if an emphasis on all three components would be sufficient to ensure a "culture of evidence." Third, with the limited response rate and participation in the study from both colleges, it is difficult to assume all views from the colleges were represented. Finally, the study was limited to two mid-size, urban community colleges in Texas in their second year of participation as a part of the Achieving the Dream initiative. Different findings might

have occurred if the colleges had different sizes and urbanicities, or if they had been studied during the first year or later years of their participation in Achieving the Dream.

FUTURE RESEARCH POSSIBILITIES

As noted in the limitations section, this study focused on two mid-size community colleges in Texas in an urban center. The replication of this study with smaller or larger colleges of varying levels of urbanicity would further develop our understanding of the development of an institutional "culture of evidence." Also, it would be interesting to see the components needed and the participant perceptions of the process change significantly from year to year in the Achieving the Dream initiative.

Another important area of future research pertains to gaining a better understanding of the knowledge and skills needed by all college constituents in using and understanding student performance data. Studies on what training is needed and best pedagogy behind the training would be important points of knowledge as colleges attempt to increase the number of active participants in a data-driven environment. In obtaining this knowledge, research of a broader sampling of college employee groups into their experience with and frequency of use of data would provide insight in patterns of gaps in the knowledge and experiences of community college constituents.

Finally, while through using the concept of "culture" as described in the literature this study sought to link institutional change to constituent perceptions, it would be useful to link perceptions to other indicators of progress in the development of a data-driven culture at an institution. Such indicators might be quantitative in nature and provide

numerical evidence of characteristics described in the "culture of evidence" section of the *Community College Inventory*.

CONCLUSION

Much of an institution's culture—the "way things are done around here"—is composed of shared perceptions of reality of the different constituent groups at the college. Thus, by studying the perceptions held by different groups at the college regarding a "culture of evidence," one can identify the components of a data-driven environment more and less fully adopted by the institution. This study intended to do just that by studying the perceptions of administrators, faculty, and staff at two community colleges in Texas committed to the development of a "culture of evidence" in their participation in the Achieving the Dream initiative. A total of eight focus groups were held at both institutions, both college presidents were interviewed, and an electronic survey was administered to all constituents at the two colleges. Participants were asked to identify themes, or affinities, representing the important aspects of their institution's efforts to create a data-driven environment and then organize the different affinities according to the relationships participants perceived existed between them.

Results of the study showed that while responses differed to some extent at each institution, a theoretical model highlighting key leadership, data systems capacity, and broad participation could be applied to the perceptions of all of the participants. While these three components existed to some extent at each institution, only those components that were emphasized by the efforts of the college positively influence the presence of a data-driven culture. A fourth theoretical component, employee use and understanding of

data, was also discussed, although this component was not expressed in the identified affinities of the focus group participants. Responses to an institutional survey on institutional characteristics of a "culture of evidence" also indicated that the majority of respondents perceived a data-driven environment was not fully implemented at their institutions. These responses also showed that while most respondent groups felt such a culture had only been partially implemented at the institutions, participants in the Achieving the Dream Core Team at one college believed a data-driven culture already existed in its entirety at the institution.

This body of research contends that most employees at community colleges play a "passive" role in the stages of institutional data usage, including data collection, interpretation, and communication. It also argues that data-driven cultural change is contingent upon the adoption of key theoretical components, namely key leadership, data systems capacity, broad participation, and the general use and understanding of data. Progress in creating a data-driven environment is limited to the extent to which these components are emphasized and addressed. Results from this study also suggest:

- Targeted external forces can have positive impact on the development of a data-driven culture;
- Faculty need to be strategically included in the different stages of data collection, interpretation, and communication, though this participation should be targeted and sensitive to existing workloads;
- All employees should be encouraged to take strategically targeted "active" roles in data collection, analysis, and communication, instead of fulfilling passive roles of merely reporting data and waiting for results to be disseminated;

- And not all employees are equally able to understand and use data, and training is needed to provide faculty, administrators, and staff with the skills they need use data more frequently in accomplishing their daily tasks.

What people perceive to be real—substantiated or not—affects their interactions with the environment and others. Like anything, the use of data in increasing student success will only occur if community college constituents perceive it to be important in their daily work. At the time of this study, participants reported that the use of data was important because external forces and executive administrators said it was. To truly transform an institution into an organization centered on evidence and measurable knowledge, the time must come when these participants report that the use of data is important in helping students succeed because they have seen data bring success to the work they do each day.

References

Achieving the Dream. (2005a). *Fact sheet: Core commitments of participating colleges.* Chapel Hill, NC: MDC, Inc. Retrieved on March 19, 2006 from http://www.achievingthedream.org/_images/_index03/TheAchievingTheDreamInitiative.pdf.

Achieving the Dream. (2005b). *Success in what counts: National initiative promotes change.* Chapel Hill, NC: MDC, Inc. Retrieved on March 19, 2006 from http://www.achievingthedream.org/_images/_index03/SuccessIsWhatCounts.pdf.

Alamo Community College District (SCCD). (2005). *SCCD Achieving the Dream college proposal.* San Antonio, TX: SCCD Student Outcomes Assessment and Research Center. Retrieved on April 7, 2006 from http://www.SCCD.edu/district/SCCDres.

Studied Community College District (SCCD). (2004). *Research brief: Cohort demographics.* San Antonio, TX: SCCD Student Outcomes Assessment and Research Center. Retrieved on April 7, 2006 from http://www.SCCD.edu/district/SCCDres.

Alfonso, M. (2004). *Educational attainment of Hispanics in sub-baccalaureate education.* Paper presented at the Roundtable on Community Colleges and Latino Educational Opportunity, The Civil Rights Project at Harvard University, Cambridge.

Bailey, T.R. (2005). *Implications of educational inequality for the future workforce.* Paper prepared for the symposium on The Social Costs of Inadequate Eduaction, Teachers College, Columbia University, October 24-25, 2005.

Bailey, T.R., and Alfonso, M. (2005). *Paths to persistence: An analysis of research on program effectiveness at community colleges.* New Agenda series. Lumina Foundation for Education.

Bailey, T.R., Alfonso, M., Calcagno, J.C., Jenkins, D., Kienzl, G., and Leinbach, T. (2004). *Improving student attainment in community colleges: Institutional characteristics and policies*. Community College Research Center, Teachers College, Columbia University. Retrieved on April 19, 2005 from www.tc.columbia.edu/ccrc.

Bailey, T.R., Calcagno, J.C., Jenkins, D., Kienzl, G.S., and Leinbach, D.T. (2005). *Community college student success: What institutional characteristics make a difference?* Community College Research Center, Teachers College, Columbia University. Retrieved on April 10, 2006 from www.tc.columbia.edu/ccrc.

Bailey, T.R., Jacobs, J., Jenkins, D., and Leinbach, T. (2003). *Community Colleges and the equity agenda: What the record shows*. Community College Research Center, Teachers College, Columbia University. Retrieved on April 19, 2005 from www.tc.columbia.edu/ccrc.

Bailey, T.R., Jenkins, D., and Leinbach, T. (2005a). Graduation rates, student goals, and measuring community college effectiveness. *CCRC Brief, 28*, 1-4.

Bailey, T.R., Jenkins, D., and Leinbach, T. (2005b). *Is institutional success labeled institutional failure? Student goals and graduation rates in the accountability debate at community colleges.* CCRC Working Paper No. 1. Community College Research Center, Teachers College, Columbia University.

Bailey, T.R., Jenkins, D., and Leinbach, T. (2005c). *Community college low-income and minority student completion study: Descriptive statistics from the 1992 high school cohort.* Community College Research Center, Teachers College, Columbia University.

Bailey, T.R., Jenkins, D., and Leinbach, T. (2005d). *What we know about community college low-income and minority student outcomes: Descriptive statistics from national surveys*. Community College Research Center, Teachers College, Columbia University.

Baker, G.A. (1998). *Managing change: A model for community college leaders.* Washington, D.C.: Community College Press.

Barkdoll, G.L. (1998). Individual personality and organizational culture or "Let's change this place so I feel more comfortable." *Public Administration and Management: An Interactive Journal, 3*(2).

Berkner, L., Cuccaro-Alamin, S., & McCormick, A. (1996). *Descriptive summary of 1989-90 beginning postsecondary students: Five years later.* Washington, DC: National Center for Education Statistics.

Berquist, W. (1992). *The four cultures of the academy.* San Francisco, CA: Jossey Bass.

Birnbaum, R. (2004). The end of shared governance: Looking ahead or looking back. *New Directions for Higher Education, 127*, 5-22.

Birnbaum, R. (2000). *Management fads in higher education.* San Francisco: Jossey-Bass.

Brint, S., and Karabel, J. (1989). *The diverted dream: Community colleges and the promises of educational opportunity in America, 1900-1985.* New York: Oxford University Press.

Brooks, R.L. (2005). Measuring university quality. *The Review of Higher Education, 29*(1), 1-21.

Burgess, R. (1984). *The research process in educational settings: Ten case studies.* London: Falmer.

Burke, J. C. (Ed.). (2005). *Achieving accountability in higher education: balancing public, academic, and market demand*. San Francisco: Jossey-Bass.

Burton, D. (2000). *Research training for social scientists: A handbook for postgraduate researchers*. London: Sage.

Byars, L.L. (1991). *Strategic Management, 3rd ed.* New York: HarperCollins.

Carnivale, A.P., and Desrochers, D.M. (2004). Why learning? The value of higher education to society and individual. *Keeping America's Promise*. A joint publication of Education Commission of the States and League for Innovation in the Community College. Denver: Education Commission of the States.

Chartier, R. (1988). General introduction: Print culture. In Chartier, R. (ed.), *The culture of print: Power and the use of print in early modern Europe.* Princeton, NJ: Princeton University Press.

Choy, S.P. (2000). Low-income students: Who they are and how they pay for their education. *Education Statistics Quarterly, 2*(2).

Clark, A. (1997). *Being there: Putting brain, body, and world together again.* Cambridge, MA: MIT Press.

Cohen, A.M., and Brawer, F.B. (2003). *The American Community College, fourth edition.* San Francisco: Jossey-Bass.

College One. (2005). *Research brief: Graduation.* San Antonio, TX: Office of Institutional Effectiveness and Research. Retrieved on April 7, 2006 from http://www.SCCD.edu/College One.

College One. (2004a). *2003-2004 Fact book.* San Antonio, TX: College One.

College One. (2004b). *Research brief: Cohort demographics.* San Antonio, TX: Office of Institutional Effectiveness and Research. Retrieved on April 7, 2006 from http://www.SCCD.edu/College One.

College Two. (2005a). *Research brief: Cohort demographics*. San Antonio, TX: Office of Institutional Research, Planning, and Effectiveness. Retrieved on April 7, 2006 from http://www.SCCD.edu/College Two.

College Two. (2005b). *Research brief: Graduation.* San Antonio, TX: Office of Institutional Research, Planning, and Effectiveness. Retrieved on April 7, 2006 from http://www.SCCD.edu/College Two.

Collins, J. (2001). *Good to Great: Why some companies make the leap and others don't.* New York: Harper Business.

Council for Opportunity in Education. (2005). *About TRIO.* Retrieved on June 14, 2005 from http://www.trioprograms.org/whatisTRIO_talkingpoints.html.

Creswell, J.W. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage Publications.

David, F.R. (1991). *Strategic Management, 3rd ed.* Old Tappan, NJ: Macmillan.

DeNavas-Walt, C., Proctor, B.D., and Mills, R.J. (2004). *Income, poverty, and health insurance coverage in the United States:2003. Current population reports: Consumer income.* Washington, DC: US Census Bureau.

Dimond, J. (1991). Faculty participation in policy making. In Brinbaum, R. (ed.), *Faculty in governance: The role of senates and joint committees in academic decision making.* New Directions for Higher Education, 75. San Francisco: Jossey-Bass.

Dobelle, E. (1993). The president's role in building internal consensus for accreditation. *New Directions for Community Colleges, 83,* 61-66.

Dubrow, G. (2004). Collegiality and culture: general education curriculum reform at Western Protestant University. *The Journal of General Education, 53*:2, p. 107-134.

Eliasmith, C. (2001). Distributed representation. In Eliasmith, C. (Ed.), *Dictionary of philosophy of mind.* Retrieved on October 19, 2005 from www.artsci.wustl.edu/~philos/MindDict/distributedrepresentation.html.

Evelyn, J. (2005). College enrollments grow more diverse. *Chronicle of Higher Education, 51*(41), A28.

Ewell, P. T. (1989). Institutional characteristics and faculty/administrator Perceptions of outcomes: An exploratory analysis. *Research in Higher Education, 30*(2), 13–36.

Federal TRIO Office. (2004). *TRIO Newsletter Fall 2004.*

Flannigan, S.L. (2005). *Cultural congruence and student connection in the community college: A case study.* Unpublished doctoral dissertation, University of Texas at Austin.

Friedman, A. (2005). *Toward data driven university departmental strategies.* Columbus, OH: Department of Industrial and Systems Engineering, The Ohio State University.

Gerber, L.G. (2001). "Inextricably linked": Shared governance and academic freedom. *Academe, 87*(3), 22-24.

Giere, R.N., and Moffatt, B. (2003, April). Distributed cognition: What the cognitive and the social merge. *Social Studies of Science, 33*(2), 301-310.

Gilbert, R. (2005). *News Release: Community colleges awarded national grant to help more students succeed: Colleges part of a national initiative that includes funding and broad support.* Retrieved on March 19, 2006 from http://www.aacc.nche.edu/Content/ContentGroups/Headline_News/June_20051/ATDColleges.pdf#search='Achieving%20the%20Dream%20Gilbert%20News%20release'.

Graves, W.H. (2005). Improving institutional performance through IT-enabled innovation. *Educause Review, 40*(6), 79-98.

Green, C.G., Smallen, D., Leach, K., and Hawkins, B.L. (2005). Data: Roads traveled, lessons learned. *Educause Review, 40*(2), 14-24.

Greene, T. (2005). *Bridging the great divide: Exploring the relationship between student engagement and educational outcomes for African American and Hispanic community college students in the state of Florida.* Unpublished doctoral dissertation, University of Texas at Austin.

Gose, B. (2005). In some states, enrollments will just keep growing. *The Chronicle of Higher Education, 51*(25), B10.

Hansen, E..M. (2003). *Educational administration and organizational behavior, 5th ed.* Boston, MA: Pearson Education, Inc.

Hamm, R.E. (2004). Going to college: Not what it used to be. *Keeping America's Promise.* A joint publication of Education Commission of the States and League for Innovation in the Community College. Denver: Commission of the States.

Harrell, T.A. (2004). *How teachers think about their work: The first step in defining quality teachers.* Unpublished doctoral dissertation, University of Texas at Austin.

Hicswa, S.G. (2003). *The role of community college presidents in vision building for rural community development.* Unpublished doctoral dissertation, University of Texas at Austin.

Hoff, D.J. (2005). NCLB focuses on data tools. *Education Week*, *24*(35), 12-17.

Hutchins, E. (1996). *Cognition in the wild.* Cambridge, MA: MIT Press.

Jazzar, M., and Algozzine, B. (2006). *Critical issues in educational leadership.* Boston: Peason Education, Inc.

Johnston, G.H., and Kristovich, S.A.R. (2000). Community college alchemists: Turning data into information. *New Directions for Community Colleges, 109*, 63-73.

Kaplan, G.E. (2004). Do governance structures matter? *New Directions for Higher Education, 127,* 23-34

Kater, S., and Levin, J.S. (2005). Shared governance in the community college. *Community College Journal of Research and Practice, 29*(1), 1-23.

Kezar, A. (2004). Governance: Relationships, trust, and leadership, or structures and formal processes? *New Directions for Higher Education, 127*, 35-46.

Kezar, A., and Eckel, P. (2002). The effect of institutional culture on change strategies in higher education: Universal principles or culturally responsive concepts? *Journal of Higher Education, 73*:4, p. 435-460.

Kim. H.M. (2000). *Developing ontologies to enable knowledge management: Integrating business process and data driven approaches.* Presented at the AAAI Spring Symposium Series 2000, Stanford, CA.

Knapp, M.S., Swinnerton, J.A., Copland, M.A., and Monpas-Huber, J. (2006). *Data-informed leadership in action.* Seattle, WA: Center for the Study of Teaching and Policy, University of Washington. Retrieved on December 14, 2006 from www.ctpweb.org.

Kuh, G.D., and Whitt, E.J. (1988). *The invisible tapestry: Culture in American colleges and universities.* Washington, D.C.: ERIC Clearinghouse on Higher Education.

Kuh, G.D., Kinzie, J., Schuh, J.H., Whitt, E.J., and associates. (2005). *Student success in college: Creating conditions that matter*. San Francisco: Jossey-Bass.

Lachat, M.A. (2001). *Data-driven high school reform: The breaking ranks model.* Providence, RI: Brown University.

Lauer, J.M., and Asher, J.W. (1998). *Composition research: Empirical designs.* New York: Oxford University Press.

Lakos, A., and Grey, C. (2000). Personalized library portals as an organizational culture change agent. *Information Technology and Libraries, 19:*4, p. 169-74.

League for Innovation in the Community College. (2004). *An assessment framework for the community college: Measuring student learning and achievement as a means of demonstrating institutional effectiveness.* White Paper, Assessment Framework v1.0. Retrieved on February 27, 2006 from www.league.org.

Levin, J.S. (1996). *Presidential Succession and Organizational Change in the Community College. ASHE Annual Meeting Paper.* Paper presented at the 21st Annual Meeting of the Association for the Study of Higher Education, Memphis, Tenn., Oct. 31–Nov. 3, 1996. 36 pp. (ED 402 848)

Levin, J.S. (1998). Making sense of organizational change. *New Directions for Community Colleges, 102*, 43-54.

Light, D., Wexler, D.H., and Heinze, J. (2005). Keeping teachers in the center: A Framework of data-driven decision-making. Education Development Center, Inc.'s Center for Children and Technology, USA.

Lincoln, Y.S., and Guba, E.G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage.

Love, N. (2000). *Using data – Getting results. Collaborative inquiry for school-based mathematics and science reform.* Cambridge, MA: Regional Alliance at TERC.

Lauer, J.M., and Asher, J.W. (1988). *Composition research: Empirical designs.* New York: Oxford University Press.

Lucey, C.A. (2002). Civic engagement, shared governance, and community colleges. *Academe, 88*(4), 27-31.

Lumina Foundation for Education. (2005). Achieving the Dream to serve community college students. *Student Access and Success News, January 2005,* 1-2. Retrieved on March 20, 2006 from http://www.luminafoundation.org/newsroom/newsletter/index.html.

MacGregor Burns, J. (1978). *Leadership*. New York: Harper Torchbooks.

Marshall, C., and Rossman, G.B. (1989). *Designing qualitative research.* Newbury Park, CA: Sage.

Matthes, K. (1993). Strategic planning: Define your mission. *HR Focus, 70,* 11-12.

May, T. (2001). *Social research: Issues, methods, and process, 3rd ed.* Buckingham: Open University Press.

McClenney, B.N. (2005). Unpublished program notes. Achieving the Dream Initiative, The University of Texas at Austin.

McClenney, K.M. (2004). Keeping America's promise: Challenges for Community Colleges. *Keeping America's Promise*. A joint publication of Education Commission of the States and League for Innovation in the Community College. Denver: Education Commission of the States.

McClenney, K.M., and McClenney, B.N. (2003). *Community college inventory: Focus on student persistence, learning and attainment.* Austin, TX: University of Texas at Austin.

McCulloch, G. (2004). *Documentary research: In education, history, and the social sciences.* Social Research and Educational Series 22. London: RoutledgeFalmer.

McIntire, T. (2005). Maximize your mining, part two. *Technology & Learning, 25*(11), 24-26, 28, 30.

MDC, Inc. (2005). *Increasing student success at community colleges: Institutional change in Achieving the Dream: Community College Count.* Lumina Foundation for Education.

Mertens, D.M. (1988). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches.* Thousand Oaks, CA: Sage.

Morest, K.S. (2005). Community college institutional research: Important but invisible. Presentation at the American Association of Community Colleges Conference, April 10, 2005.

Morgan, G. (1998). *Images of organization: The executive edition*. San Francisco, CA: Berrett-Koehler Publishers, Inc.

Morrison, K. (2001). Randomised controlled trials for evidence-based education: Some problems in judging "what works." *Evaluation and Research in Education, 15*(2), 69-83.

Murdock, S.H. (2006). *The population of Texas: Historical patterns and future trends affecting education.* San Antonio, TX: Institute for Demographics and Socioeconomic Research, The University of Texas at San Antonio.

National Center for Education Statistics. (2004). *The condition of education 2004*. NCES 2004-077. Washington, D.C.: U.S. Government Printing Office.

National Center for Educational Statistics. (1991). Report on remediation in the fall 1989. Washington, DC.

Nichols, J.O. (1995). *A practitioner's handbook for institutional effectiveness and student outcomes assessment implementation*. New York: Agathon.

Northcutt, N., and McCoy, D. (2004). *Interactive qualitative analysis: A systems method for qualitative research.* Thousand Oaks, CA: Sage.

Odom, S.L., Bratlinger, E., Gersten, R., Horner, R.H., Thompson, B., and Harris, K.R. (2005). Research in special education: Scientific methods and evidence-based practices. *Council for Exception Children, 71*(2), 137-148.

Palomba, M., & Banta, T. (1999). *Assessment essentials: Planning, implementing and improving assessment in higher education.* San Francisco: Jossey-Bass.

Parilla, R. (1993). Adapting institutional structure and culture to change. *New Directions for Community Colleges, 21*, 21–33.

Platt, J. (1981). Evidence and proof in documentary research. *Sociological Review, 29*(1), 31-66.

Pope, M.L., and Miller, M.T. (2005). Leading from the inside out: Learned respect for academic culture through shared governance. *Community College Journal of Research and Practice, 29*(9/10), 745-757.

Popham, W.J. (2005). Instructional quality: Collecting credible evidence. *Educational Leadership, March 2005,* 80-82.

Purnell, R., Blank, S., Scrivener, S., and Seupersad, R. (2004). Support success: Services that may help low-income students succeed in community college. MDRC. Retrieved on April 10, 2006 from http://www.mdrc.org/publications/399/abstract.html.

Rippey, D.T. (1987). *Some called it Camelot: The el Centro story.* Austin, TX: The University of Texas at Austin.

Roueche, J.E., Baker, G.A., and Rose, R.R. (1989). *Shared vision: Transformational leadership in American community colleges.* Washington, D.C.: The Community College Press.

Roueche, J.E., Ely, E.E., and Roueche, S.D. (2001). *In pursuit of excellence: The Community College of Denver*. Washington, D.C.: Community College Press.

Roueche, J.E., Johnson, L.F., and Roueche, S.D. (1997). *Embracing the tiger: The effectiveness debate & the community college.* Washington, DC: Community College Press.

Rouse, C. E. (1995). Democratization or diversion? The effect of community colleges on educational attainment. *Journal of Business and Economic Statistics, 13*(2), 217-224.

Rowley, D.J., Lujan, H.D., and Dolence, M.G. (1997). *Strategic change in colleges and universities: Planning to survive and prosper.* San Francisco: Jossey-Bass.

Schachter, D. (2005). The importance of understanding organizational culture. *Information Outlook, 9*(6), 18-19.

Scott, J. W. (1997). Death by Inattention: The Strange Fate of Faculty Governance. *Academe, 83,* 28–33.

Scott, M., Bailey, T.R., and Kienzl, G.S. (2006). Relative success? Determinants of college graduation rates in public and private colleges in the U.S. *Research in Higher Education, 47*, 247-277.

Sharifian, F. (2003). On cultural conceptualizations. *Journal of Cognition and Culture, 3*(3), 187-207.

Shore, B. (1996). *Culture in Mind: Cognition, Culture, and the Problem of Meaning.* Cambridge, MA: MIT Press.

Singleton, R.A., and Straits, B.C. (2005). *Approaches to social research, fourth ed.* New York: Oxford University Press.

Stake, R.E. (1995). *The art of case study research.* Thousand Oaks, CA: Sage Publications.

Status, E. (2006). Graduation and retention rate by ELT status. Eric Clearinghouse for Community Colleges. Retrieved on March 19, 2006 from http://www.aacc.nche.edu/Content/ContentGroups/Headline_News/June_20051/ATDColleges.pdf#search='Achieving%20the%20Dream%20Gilbert%20News%20release'.

Strauss, C., and Quinn, N. (1997). *A cognitive theory of cultural meaning.* New York: Cambridge University Press.

Talmy, L. (1983). How language structures space. In Pick, H.L., and Acredolo, L.P. (Eds.), *Spatial orientation: Theory, research, and applications.* New York: Plenum Press, 225-282.

Texas Higher Education Coordinating Board (THECB). (2005). *Closing the gaps by 2015: 2005 progress report.* Retrieved on March 19, 2006 from http://www.thecb.state.tx.us/reports/PDF/0870.PDF.

Texas Higher Education Coordinating Board (THECB). (2004). *2004 annual data profile: Community and technical colleges statewide summary.* Retrieved on February 27, 2006 from http://www/thecb.state.tx.us.

Texas Higher Education Coordinating Board (THECB). (n.d.). *Closing the gaps: The Texas higher education plan.* Retrieved on March 19, 2006 from http://www.thecb.state.tx.us/reports/PDF/0379.PDF.

Thaxter, L.P., and Graham, S.W. (1999). Community college faculty involvement in decision making. *Community College Journal of Research and Practice, 23*, 655-674.

Thomas, A.A., and Strickland, A.J. (1996). *Strategic management, 9th ed.* Burr Ridge, IL: Irwin.

Thompson, B., Diamond, K.E., McWilliam, R., Snyder, P., and Snyder, S. (2005). Evaluating the quality of evidence from correlational research for evidence-based practice. *Council for Exceptional Children, 71*(2), 181-194.

Tierney, W.G., and Minor, J.T. (2004). A cultural perspective on communication and governance. *New Directions for Higher Education, 127*, 85-94.

Tyler Junior College. (2005). *TRIO program services*. Retrieved on June 14, 2005 from http://supserv.tjc.edu/TRIO/plan.htm.

U.S. Department of Education. (2002). *Descriptive Summary of 1995-96 Beginning Postsecondary Students: Six Years Later.* NCES 2003-151.

Varela, F.J, Thompson, E., and Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. Cambridge, MA: MIT Press.

Webb, E.J., Campbell, D., Schwartz, R., and Sechrest, L. (1966). *Unobtrusive measures: Nonreactive research in the social sciences.* London: Rand McNally.

Welsh, J.F., and Metcalf, J. (2003). Faculty and administrative support for institutional effectiveness activities: A bridge across the chasm? *The Journal of Higher Education, 74*(4), 445-468.

Welsh, J.F., Nunez, W.J., and Petrosko, J. (2005). Faculty and administrative support for strategic planning: A comparison of two- and four-year institutions. *Community College Review, 32*(4), 20-39.

Wilson, C.D. (2004). Coming through the open door: A student profile. *Keeping America's Promise*. A joint publication of Education Commission of the States and League for Innovation in the Community College. Denver: Education Commission of the States.

Yin, R.K. (2003). *Case study research: Design and methods, 3rd ed.* Thousand Oaks, CA: Sage.

Yore, L.D. (2003). Quality science and mathematics education research: Considerations of argument, evidence, and generalizability. *School Science and Mathematics, 103*(1), 1-8.

Vita

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